

Field Book of ^{Vol. 20}

W. L. Jepson.

If lost finder please
return to W. L. Jepson,
Berkeley, California,
and receive reward.

— " —
1913

— " —
Department of Botany,
University of California,
Berkeley, California

Berkeley to El Portal.

Sept. 7, 1913.

1

- The International Phytogeographers' Excursion arrived in California from Oregon in the morning of Sept. 7. Sunday. I met them at the 16th-st. Station and rode to the Pri where we had breakfast and took the train for Yosemite at 9⁰⁰. Stopped for lunch at Tracy. The party's interest was heightened at following up the Merced canon through the foothills of the Sierra, first the Blue Oak (*Quercus douglasii*) alone, then *Pinus sabiniana* came in, then *Quercus wislizeni* and after a while great pure patches of *Adenostoma fasciculatum* succeeded the

W. L. Jepson
Berkeley,
California

smaller patches of *Canollus conatus*. The next morning we rose at 5⁰⁰. Two stage loads for Yosemite. Arrived Sentinel Hotel at 10⁰⁰. Mr. Whitney of the S.P. Co., traveling passenger agent, had been sent with us and facilitated things all along the line. Going up the hill to Inspiration Pt. we in the second stage walked a good deal: Schroter, Paulsen, Dachmowski, Skottsberg etc. collecting. We stopped so much that it fell dark after Chingapin and we drove into Maroma about 7:15. Next am. up to Big Trees in same way. Schroter took off his hat and waved it wildly in sight of the great giants. We spent

Sept. 8, 1913

all day in the Grove, the party collecting and photographing and looking at the trees. (Baxter is still the photog. at the Big Tree Cabin). To my dismay the park authorities are clearing out the brush clean and bringing up the little fir trees from below into specimen trees on a tower! It is terrible. We saw Mayor Littlebrant in Yosemite. He seemed delightful; was most kind in offering help and animals; and asked for suggestions regarding the care of the park. So I have written him about this matter.

I saw no *Abies magnifica* in association with *Sequoia gigantea* in Mariposa Grove!!

- *Abies magnifica* Come into this belt rather suddenly coming up the Chinquapin
- Glacier Pt. Road. The geometrical figures of the tops and of the whole tree, esp. when young are very remarkable and excite the interest of our travelers. Circles of *Berberis* in the trunks are fine.
- *Castanopsis sempervirens*. In fl. now with the female fls. at base of spikes
- *Arctostaphylos* *navadensis* Gray.
- The *Abies magnifica* forest is truly fine, on the plateau back of Yosemite, between Chinquapin and Glacier

- At Glacier Pt. the party walked up to Sentinel Rock where they were much interested in the herbaceous plants on the granite especially the Rat-tail, *Stellariopsis*. Schott declared that species alone was worth the trip. Engler climbed nearly to the summit but not quite. Stayed all night at Glacier Pt. Trail to Yosemite by Nevada Fall. Our friends on their short ride into Yosemite & out again gained no just idea of the walls nor did they until going down this trail. Then their wonder grew and grew and finally admitted that they had been disappointed in Yosemite and that the place had been over-pictured.

Glaciér Pt. to El Portalto Berkeley

- *Oxer glaberrum*.
Illilouette Trail. An occasional tree
- Engler left his watch in the hotel and discovered his loss at Illilouette. I sent word by passing people and the watch was sent down and reached Curry's Camp at the same time that he did. Engler was very game, walking the eleven miles to Camp Curry from Glaciér Pt. We had a riding horse for him but he refused to use it. At 2:30 we left by stage for El Portal. Near El Portal Nichols and myself left the stage, he to photograph Siskiyou Pine and I for company

Sept. 11-12, 1913

- *Torreya californica*. Tree 60 ft. high near Pulpit Rock.
- Stayed all night at El Portal. Train next am. for Oakland. Left train at West Berkeley where I had automobiles waiting for the party, provided by the Berkeley Chamber of Commerce. Drove to Hotel Shattuck. At 6⁰⁰ drove the party to Hotel Oakland for the dinner of the California Botanical Society. Schroten said the dinner was the finest menu and grandest occasion since the party landed in New York. The guests and members were happily placed. Bode who knows

many people in Zurich was happily placed between Professor Schröter and Frau Dr. Brockmann. C. Hart Merriam was there at my invitation. For toasts, after my introd. speech. I called on my colleague Professor Eschell to join me in welcoming the guests of honor. I then rose to introduce Barrows, Acting President of the Univ. of Calif. But was interrupted by Mrs. Lemmon who seized the floor and gave a running biography of herself and husband. Then I introduced Barrows, claiming him as a botanist by reason of his classical paper of his earlier youth, The Ethno-

Botany of the Central Indians. Elin Barrows, came Cowles who spoke most happily and with a bubbling humor; then Tubor who spoke in German with hints by Sachnovski; then finally Engler who spoke with great power. He has few English words but used them with Biblical strength. He told of his pleasure in California and made a plea for a great Botanic Garden in California, instancing the favorable climate and the wonderful vegetation of the state. But you say you have no money. Money! Ah no. You who have rebuilt in almost a day the great city of San Francisco destroyed by a terrible earth quake cannot say you have no money. It is not night when money to build cities and no money for a scientific garden in a country like California [Cont. p. 14.]

A. Engler

Berlin - Dahlen

(Post Stglitz)

Albertstr. 2.

Germany

C. v. Tüchsen
München, Universität.

C. Schroter

Merkurstr. 76
ZürichDr. R. Rikel
Zürichbergstrasse 30
Zürich SwitzerlandHenry C. Cowles,
Univ. of Chicago,
ChicagoEdith S. Clements
Frederick S. Clements
University Minnesota
MinneapolisOle Paulsen
Botanical Museum Copenhagen

Alfred Wahnonahi
Ohio State Univ.
Columbus, Ohio

Carl Kottroben
Univ. of Uppsala
Sweden

George F. Nichols,
Yale University,
New Haven, Conn

Geo. D. Fuller
University of Chicago

Prof. Dr. Theo. J. Humps.
University of Amsterdam,
Holland, Europe.

[I did not secure the signatures
of Dr. + Frau Brochman through
their leaving Yosemite early;
likewise Mr. & Mrs. Tansley of
Cambridge, England]

cont. from p. 9. After this toast I asked the company to rise and we drank a toast to Engler standing, to his long life and prosperity, to the continued success of his great botanical projects, and wishing for ourselves that we may like him be ^{still} youthful as the years pass and like him travel to the ends of the earth in the fulness of our days. After the lecture, to Schröter's lecture with its beautiful slides of Alpine vegetation.

[The next day I took Prof. C. Schröter and Dr. Theo. J. Stimpf to Santa Rosa to see Luther Burbank who received us cordially and gave several hours to the party. I do not appear to have made a note of this at the time. See

-*Ceanothus prostratus* occurs in the pine woods between Chingnapin and Wawona. It makes a close flat weave, dark green. The leaves are scarcely or not toothed as I remember. But *C. diversifolius* is a loose grey mat, with the leaves in branchlets sticking up a little. You hardly notice an individual leaf in case of *Ceanothus prostratus*. *C. diversifolius* occurs rather abundantly in the open woods between Mariposa Big Tree Grove & Wawona, at least there is more of it than I expected. *C. parvifolius* is also more abundant than I supposed about Mariposa Grove & Chingnapin. Now that both it and *C. integrifolius* are out of fl., *C. parvifolius* is rather the more noticeable.

Yosemite Park

No. 5636. *Abies concolor* Lindl. & Gord.
4 ft. h. Young tree. Illilouette Trail
Mariposa Co.

No. 5637. *Quercus vaccinifolia*
Dense thickets on slopes,
northerly slopes, Illilouette
Trail.

No. 5638. *Abies concolor*
Illilouette Trail

No. 5639. *Abies concolor*
Illilouette Trail

No. 5640. *Oxyopsis occidentalis* C.R.
No. 5640a. *Ligusticum Grayi* C.R.
Peregoy Mdw.

Near Peregoy Mdw.

No. 5641. *Gayophytum ramosissimum*
Sentinel Dome. f. & g.

No. 5642. *Sambucus*
Berries blue black.

Back of Glacier Pt.

No. 5643. *Eriogonum um-*
bellatum var. *umbellatum*
Back of Glacier Pt.

Sept. 10, 1913

Sept. 8-11, 1913.

No. 5644. *Sambucus*.
Same as 5642.

No. 5645. *Arctostaphylos*
patula Greene.
Chingnapin to Glacier.

No. 5646. *Salix eastwoodiae* ^{chell.} ~~see~~ Schen.
Chingnapin to Glacier
near Peregoy Mdw.

No. 5647. *Eriogonum wrightii*
var. *subscaposum*
Sentinel Dome. Sept. 10.

No. 5648. *Polygonum douglasii*
Sentinel Dome. Greene

No. 5649.
Back of Glacier Pt.

No. 5650. *Cuscuta subinclusa* D. & H.
Wawona, towards Mariposa Grove

No. 5651. *Ceanothus diversifolius* Wawona, c. 4100 ft.
Kell. Mariposa Co.

No. 5652. *Viola lobata* Bth.

Above Nauvau, towards Big Trees.
c. 5000 ft.

✓ No. 5653. *Arctostaphylos*
Nauvau to Big Trees. *patula*
Berries whitish when taken. ^{green}
c. 5000 ft.

No. 5654. *Castenopsis*
Mariposa Big Tree Grove
at the Big Tree Cabins
in shade.

No. 5655. *Leucanthus parvifolius* Trel.

Mariposa Big Tree Grove

No. 5656. *Symphoricarpos*
with preced.

✓ No. 5657. *Rosa* ^{*pinetorum* Hel.} *picocarpa* Gray
1 ft. h. with preced. Pet. pink-red, ^{matched}
no. 5657a. *Rosa pinetorum* Hel.

✓ No. 5658. *Arctostaphylos*
Mariposa Dudley var. *divisum* Jepson.

Mariposa Big Trees to
Nauvau. c. 5000 ft.

* = *R. pinetorum* Hel. acc. E. K. C.

No. 5659. *Arctostaphylos*
patula ^{green}, Near Mariposa
Grove.

✓ No. 5660. *Arctostaphylos*
patula ^{green} galls.
with preced.

No. 5661. *Eriogonum*
nudum var. *nudum*

No. 5662. Yosemite
Comp. *Senecio carpus* *rigidus* ^{Finckh}

No. 5663. Yosemite

✓ No. 5664. *Arctostaphylos*
near Inspiration Pt. Leaves ^{*patula*} ^{very green}

No. 5665. *Brickellia grandiflora*
Comp. Yosemite.

var. *pacifica* (Bailey) Hitchc.
No. 5666. *Carex vesicaria* L.
Yosemite Valley near
Sentinel Hotel.

3900 ft.

- no. 5667. *Galium*
Yos. Valley
- no. 5668. *Polygonum douglasii*
Stamens 8! Yos. Valley. Greene
- no. 5669. *Rhamnus* ^{CB Wolf} *californica* ^{rubra yosemite}
Each Yosemite. Intergrade to *Rhamnus*
rubra Greene var. *obtusissima* Jepson.
- no. 5670. *Eriogonum* ^{roseum} *vargatum* ^{Benth}
El Portal.
- no. 5671. *Pectastaphylas mariposa* Dudley. This looks to me
exactly like the best or
most typical herb. spec. of
A. mariposa. El Portal
Common in this reg. and below!
- no. 5672. *Sambucus glauca*
Back of Glacier Pt.
Berries blue black! Cluster taken
about 1/6 of panicle - corymb.

mariposa

- no. 5673. *Quercus chrysolepis*, var.
Low shrub 5 ft. high, not dif-
fering in habit from the shrubs
of *Q. vaccinifolia* a little higher
up, towards Glacier Pt. (no. 5637),
unless possibly the stems not
quite so slender in 5673. These
specimens were taken from shrubs
on the granite shelf overhanging
and right by the summit of
Nevada Fall.

- no. 5674. *Polygonum minimum*. ^{Wats}
Nevada Fall, at summit, in
moist ^{soil} collected in crevice of granite
5900 ft.

- no. 5675. *Juniperus occidentalis* ^{Hook.}
Summit of Nevada Fall.
5900 ft.

- no. 5676. *Acer glabrum* Torr.
Illilnetta Trail.

No. 5677. *Arctostaphylos patula*.
A. parryana in form of berries,
 acc. to my remembrance
 of Abrams' account of them,
 1 E. berries pointed. Illilouette Trail.

No. 5678. *Arctostaphylos nevadensis* Gray.

Illilouette Trail.
 No. 5678a *Abies magnifica* Murr.
~~concolor~~ Illilouette Trail *magnifica*

No. 5679. *Eupatorium occidentale* Hook. Glacier Point.

No. 5679a.

Near Illilouette Falls.

- There was a vast difference in the attitude of the Continental and American Botanists towards plants. The Germans were almost wildly enthusiastic, discussing excitedly each new find and differing good-naturedly in their opinions. And collecting! Always collecting!! Everything! Laying their hands on the poorest scraps that I would not look at! *Godetia viminea* 2 in. h! in fl. Late fall dwarfs eaten down by cows!

And wanting to know the name of everything! — The Americans collected not at all! Unless to ask names and throw the material away. If you gave Clements a ? mark with a name he didn't put it down, the ? marks. Both he & Cowles want things named in the field off hand, accurately. Rather a task for a critical taxonomist.
 — Cont. vol. 27, p. 190.

5680g

No. 1 *Salicornia ambigua* = *S. virginica* L.

Plants in anthesis showing
only stamens or only pistils!
The stigmas 3, very hairy
or almost feathery, whitish
Plants sometimes with a trunk
1 ft. high and 1 inch diam.
Protandrous acc. to examination
made by my direction by Miss Goldsmith.

No. 5681. *Suaeda californica*
Low diffuse shrubs 1 to 2 ft.
high, forming low mounds
2 to 6 ft. across. Stigmas 3,
very hairy, protruded from
the closed calyx between its
tips. Afterwards the calyx
opens wide, the anthers protrude
and coming into anthesis;
from between the tips (cucullati)
if the lobes arise the filaments.
No. 5682. *Atriplex hastata* = *A. patula* ssp. *hastata*
Alameda.

— *Frankenia grandifolia*, in fl.
Petals 5; stamens 6.

— Marshes about Bay Farm Island.
Mostly pure *Salicornia ambigua*.
It is often very uniform and
level growth, in other places the
older growth sticks up above the
new growth and makes it
look ragged. *Frankenia grandifolia*
is often mixed with it,
but often occurs in pure spots
4 to 6 feet square, low mound-
like places, perhaps 1 foot high.
These are the two dominant
plants over the area, the former
90 times more abundant I
should say. *Griselinia cuneata*
appears wherever the ground
rises a few inches above
the optimum level for
Salicornia. I suppose *Salicornia*

is flooded by high tide. A little *Jaumea carnosa* occurs. There was no *Scirpus* or *Cyperaceae* of any kind observed. *Arenaria cherauthifolia* occurred on the low sand beach south shore of Bay Farm Island, as did also *Abronia umbellata* and *Frauseria*. Also *Baccharis consanguinea* (prostrate).

— *Suaeda californica*. Low shrubs ~~not~~ 3 to 10 ft broad with ascending ^{spreading} branchlets, 1 to 3 ft. h. ^{on west}

Rather common on Bay Farm Island near the bridge to Alameda and ^{correspondingly} on the Alameda shore. See 5681.

No. 5683 Grass ^{*Polypogon monspeliensis*} (L.) Desf.
Ditch. Bay Farm Island.

No. 5684.

Cult. on ^{an} old shack.

Bay Farm Island.
See notes with 5681.

No. 5685. *Spartina foliosa* Trin.

Grass, in mud-flats, over-run by tide.

— *Azalea* (*Rhod. occident.*). Miss M. L. Hutchinson has been painting wild fls. at Eureka. She says the pink-fl. *Azalea* is smaller than the white-fl. one of Yosemite, has more flowers, is compact in habit, has smaller leaves, etc. I think she said something about the odor diff.

— 22 Sept. 1913.

— Miss ^{M. L.} Hutchinson has made ^{hundreds} if not thousands of paintings, which she sells at \$2.00 apiece. The Los Angeles library has taken several hundred, the State Library has taken some, she has 500 now to be sold at \$2.00 each in a lot. They are rather pretty but of little ^{own} botanical value.

I should say they are of no real scientific value because no sets of specimens have been preserved for verification.

- *Quercus*. Great acorn crop on the Redwood River in and about Goat Mt. Very heavy on the ground beneath the trees. Deer rolling in fat! Bear very fat! Great crop of manzanita berries! - Wallis G. Kellogg, Oct., 1913.

No. 5686. *Erigeron nudum*.
var. *auriculatum*
Charter Hill, Berkeley.

Oct., 1913.

- Climate. The rains broke on the eve Nov. 1. It has been raining or with unsettled weather up to Nov. 20. On Nov. 8 we had a weather-gaw, a clear brilliant beautiful day sandwiched between stormy periods. Weather-gaw is a Scotch term given me by Mrs. Anderson^{of Edinburgh}. This day, Nov. 8., had been predicted as a storm day by Father Ricard of Santa Clara who is attracting popular attention as a weather prophet. His marked days in the month were so many that he could not be allowed any such latitude as if he had given only two or three.

No. 5687. *Phragmites vulgaris* ^{L. P.}
6 to 14 ft. h. Roots very tough,
like ropes, plow, as the
various agricultural tools in
tule reclamation will
not cut through them or
only partially or vary in-
differently and such spots
are a lot of trouble to
clear. Tule has compar-
atively soft or brittle
rootstocks and is easy
to clear out of the soil.

Called "cane" by the tule farmers.

No. 5688. *Cephalanthus occidentalis*
Slender shrub with stems 6 to 8
ft. tall, $\frac{1}{2}$ to $\frac{3}{4}$ inch thick at
base as I saw them.

Called "Button-Willow" River
banks.

No. 5689. *Solidago occidentalis* (Nutt.) T. & G.
4 to 6 or possibly 8 ft. h.,

in the masses of tule & reed
along the river bank and
rather handsome at a distance.

No. 5690. Specimen Discarded ^{10/85}

Cult. pea. on porch as climber.
Fls. ^{red} purple; banner with two
rather conspicuous vertical
crests or lamellae at base
on upper side. Stamens 9 & 1.

No. 5691. *Echinochloa zeylanensis* ^{Schult.}
Common grass in moist fields.

No. 5692. *Polygonum* ^{coccineum} _{Muhl.}
4 to 6 ft. h.

No. 5693. *Verbena hastata* L.
4 to 6 ft. h.

No. 5694. *Chenopodium ambrosioides*.
In barley and wheat
fields this gets into the
harvested straw and is threshed
out with the wheat or barley.
Its odorous seed communicate

an objectionable odor to wheat flour and it is also objectionable in barley.

No. 5695. *Cornus ~~pubescens~~*
californica ^{max.} ~~Ellis~~

No. 5696. *Hibiscus californicus* ^{Kell.}

Flowers pure white, with yellow centre, "4 or 5 inches across", acc. Filcher. Prob. Filcher's estimate of size is too large and he merely meant to indicate that the flowers are showy and noticeable like hollyhocks to which he compared them. 6 ft. h!

No. 5697. *Stachys ~~ajacoides~~* ^{albena Gray}
6 to 10 ft. h! = *S. ~~ajacoides~~* ^{albena Gray}

No. 5698. *Polygonum hartwegii*, at least the *Shealti* with green (herbarious) border. Stems diffuse,

strailing, rather short (mostly 8 to 16 inches). Totally dif. appearance and habit from no. 5692.

No. 5699. *Rumex*
3-4 ft. h.

Cyperus virens Michx.

Stems acutely triangular.

— *Ruscus aculeatus*, colored branches used for decoration in shops at Stockton.

— Middle River. — Filcher says the peat is 20 ft. deep with a sandy clay bottom. The peat will readily burn and may burn for weeks and months and become a menace. Into such sink-holes horses may go down and be lost. The soil is of course very spongy

and one can shake the ground by jumping on it. The wheels of a traction engine may sink 3 ft. over night; the driver will rock his engine back and forth until able to get out.

- Went to Middle River today with Prof. Gregg on invitation of J. A. Sanford of Stockton. We were met by Sanford, Brown of Stockton, Ollahan, an expert on produce from Stockton and a wholesaler, and Filcher (Roy Wilton), Class of 1906, Berkeley. It was a very beautiful day & we had a fine time in a launch cruising about the islands. The day was very brilliant and the willows still in foliage. *Salix nigra*

San Joaquin Delta

very common. No *Populus tremonti*. *Salix babylonica* is the tree planted most commonly at the ranch houses. Fine clusters in some places.

San Jose, Nov. 27, 1913. 37

- Stopped with the ^{Geo. R.} Greenleafs. and went in the afternoon to a meeting at Judge Richards where some people met to hear a talk ^{by me} on the feasibility of proposed botanical studies and the forming of a little club.

On Saturday went on down to Monterey. Guest of H. A. Greene, President of the Federation of Tree Clubs of America.

Greene says that a monument has been raised on the grave of La Perouse at Botany Bay and that within a short period the wreck of the La Perouse ship has been found! This is quite remarkable and very interesting.

No. 5700. *Arctostaphylos*
tomentosa Lindl.

Makes the greater portion of the
dense stand about Del Monte
chaparral

Heights; 3 to mostly 4 ft. h

The extreme form, i.e. natural type.

No. 5701. *Arctostaphylos* var.
bracteosa (DC) Abrams
~~titia~~ Eastw. Shrub 3 or 4 ft. h. forming
the dense chaparral on the sandy high-lying
slopes of Del Monte Heights. Less
typical

No. 5702. *Arctostaphylos*
parviflora Nutt. Low, 4 to 8 in.

high, almost mat-like
on the ground. Very
distinctive and not at
all like *A. hookeri* in

appearance. Berries brack. red.

Rough mats 2 or 3 ft. across.
Del Monte Heights.

No. 5703. *Helianthemum*
scoparium Nutt. in fl! Stamens 17.
Densely tufted. Stamens
Del Monte Heights.

Nov. 29, 1913.

No. 5703a. *Ericameria*. Del Monte
Heights.
No. 5704. *Corethrogyne* *californica*
Del Monte Heights.

No. 5705. *Potentilla* *umbellata* Lindl.
Del Monte Heights. = *Yorkella umbellata* Gaill.
= *Linndleyi* Greene.

No. 5706. *Arctostaphylos* *vestita*
Stump-sprouts and forms heavy crown.
Del Monte Heights.

In *Pinus radiata* grove west

of town (Pac. Imp. Co. Res.).

No. 5706a = var. *bracteosa* acc. to Adams.
Bupreskus pygmaea Sang.

No. 5707. *Bupreskus* *governiana*.
From the "old trees" in the
great pine reservation
westward from Monterey.
There is another area, a
small clump of seedlings,
about 1/2 mile south.

- *Myrica californica*, large
trees on the road from
the Carmel Hill entrance
to the reservation to Carmel,
not far from the gate. They

are 20 to 40 ft. high.

- belled at the Del Monte propagation glass houses. A lot of stuff is propagated. Evidently they also sell plants and cut flowers, for Schultz, the head gardener, was making up a funeral piece. He showed us about. He had a lot of *Stenia* for decoration; for such purpose it is the equivalent of some Caryophyllaceans thing like *Gypsophila*. Lee, is in charge of the whole grounds.

- was the guest of H. D. Greene at Monterey. With Dr. Abbott we made a trip to Del Monte Heights on Saturday

afternoon and on Sunday morning drove over the 17-mile drive, and cut across on foot- from one of the drives to the *Cupressus goveniana* grove; thence to Carmel and Carmel Mission.

Berkeley, 10 Dec. 1913.

- Ralph Horner, chief forester of the Hawaiian Islands, is here en route to Boston to be married. He says: "Joseph P. Rock was educated at Univ. Vienna to be a Catholic priest, but on going home became dissatisfied with the hierarchy of the church and broke with his family as a result. Turned up in Texas after some wanderings, having earned his living in various

ways, meanwhile having wholly deserted, and turned Baptist! was sent to China ^{the Church} as a missionary but turned on the way in Hawaii and never got farther. He had always been interested in botany and now took up botanical work under the Dept. of Forestry but was later transferred to College of Hawaii where he is now, being in effect professor of botany. He has a great power of picking up languages. One day some Japanese came into the Forest office in regard to some seeds and plants. They had no English practically, I had no

Japanese, but Rock knew how to write Chinese and as an educated Japanese of course knows Chinese we established communication with them in that way. Rock has been working successfully on the dry area floras of the islands which is very much richer in species than the rain-forest. Rock has been working mainly on forest trees and has found several new species. He has a special interest in the tree lobelias. In his critical work he has been assisted by loans of type material from Royal Bot. Gards. Berlin, Gray Herbarium and elsewhere.

- *Pickeringia montana*, Nutt.,
sprouting from root-collar
on cleared strip, - not
from trunk - stem.
- *Sphaecel calycina*, stump-
sprouting - also stem
sprouting! also sprouting in
cleared strip. Ditto *Adenostoma*
paniculatum
- Likewise stump-sprouting
from root-collar, very
spry - undulate leaves
Quercus wislizenii var. *fontescens*
glandulosa Eastw.
- *Arctostaphylos*, no. 5711,
stump-sprouting from
root-crown. Root-crown
 $3\frac{1}{4}$ to $1\frac{1}{4}$ ft. broad, showing
effects of many fires.
- *Pickeringia montana*,
sprouts from roots, especially
small roots, freely. Covering
sides of railway cuts in spots

in this way. Root very soft &
fleshy - brittle, thick, and
very much thickened just
below surface of ground.

- *Samolus thyrsiflorus*, roots
lying along the surface of the
ground & early fire-killed.
Tree in fire-lane, stump not
sprouting altho no fire!!
- Stump-sprouting on burn:-
plants ^{above ground} quite fire-killed, -
Rhamnus californica
Arctostaphylos glandulosa
Quercus wislizenii var. *fontescens*
Eriodictyon glutinosum Bth.
Vaccinium ovatum
- *Dendromecon rigidum*, ^{top} root very
stout, fleshy, brittle, yellow
juice. Runs straight down for
four or five feet at least.

- *Dendromecon rigidum* very twiggy and dense growth shrub 4 to 6 ft. high in lower part of railway embankment where soil is deep from "fill". Branches die back in winter, moss or less and are sub-deciduous. Root sprouts acc. Matthews.
Arctostaphylos nummularia, shrubs 2 to 4 ft. high, fire-killed utterly, without a sign of sprouting ever! Struck dead as if electrocuted. Shrubs not at all or scarcely burned, the leaves persisting as if not-killed.

- *Pickeringia montana*, its taproot is very stout, fleshy and somewhat brittle. It runs down 4 or 5 ft; at least. Top root swollen just below ground.

- *Aquilegia nishizenii pubescens* Its surface roots of great size 10 ft. long and 1 to 3 in. thick. Apparently these roots spread along the surface and do not go down.

- *Juglans californica*. Wied along Guis Canyon, north of Kenwood, in Napa Co. acc. A.E. Wieslander, Bot. 112.

He also says that *Arctostaphylos* (? *manzanita*) attains size of small trees in foothills towards Boyes Spr. Largest specimens he ever

saw. ^{student} A.E. Wieslander went with me today to Tamalpais for field work.

- Nodules (mycorrhizal) on roots as follows:

Ceanothus thyrsiflorus

" *rigidus*

" *foliosus*

Pickeringia montana.

- No. 5708. *Ceanothus thyrsiflorus* ^{Esch.} nodules on roots. Abundant.
 No. 5709. *Ceanothus* ^{*cuneatus* (Hook.) Nutt.} *rigidus* nodules on roots.
 No. 5710. *Ceanothus foliosus* Parry. nodules on roots.

No. 5711. *Arctostaphylos glandulosa* ^{See p. 44.}No. 5712. *Pickeringia montana* ^{See p. 44.}

Nodules on roots. Mt. Tamaupa.

No. 5713. *Rhamnus californica* ^{typica, C. Wolf}

Telegraph Cañon, Berkeley.

- *Pickeringia montana*.

Roots were taken out from rather small plants which were 1 inch thick, tapering gradually downward for two feet. cut. from p. 46.

- *Arctostaphylos* ^{glandulosa Eastw.} No. 5711 -

stump-sprouting rather vigorously on Mt. Tamaupa in the burned district.

The sprouts have very toothed leaves! but the shoots are now developing entire leaves just above the toothed ones. See no. 5711 above.

See p. 57.

- *Ericameria arborescens*.
Trunks 1 to 2 inches thick, killed by fire, and not stump-sprouting!

Berkeley, Jan. 13, 1914.

- Wilson, ^{Ernest} of the Arnold Arboretum came over from San Francisco to see me today. He is outward bound to Japan. He has spent several years in China botanizing. Says the Ginkgo is nowhere wild, absolutely unknown in a wild state. Very common in cultivation. Reports to the contrary are errors of two kinds: First, when the report is traced down it is found that there has been an error in determination; second, it is found that the trees are at the spot

Berkeley, Jan. 1914.

indicated but are plainly planted
trees. M.B.

- Pratt, the new man in Div.
Far. U.S., says that he has
discovered a small group of
Pinus monophylla near
Loyalton (Sierra Valley). He
says that ^{Raepke} Hopping says
that *Taxus baccata* is not
found in the Kaweah or
Kings but is in the Tule
River basin.

- *Eriodictyon glutinosum*, no
seedlings on Mt. Tamalpais,
only stump-sprouting on the
burned area. - W.B. Matthews.

Oakland Hills, 31 Jan. 1914

- *Holodiscus discolor* var. *anis-*
folius. Bushes slender
& straight stemmed, to 7
feet high, holding their
terminal panicles straight-
through the winter!

- *Cornus pubescens* var. *cal-*
ifornica. Very ^{dark} red or wine
color. Bushes 12 ft. h.

Some of the bushes towards
head of San Leandro Creek
and Kohler Cañon hold their
leaves in part up to this time.

- *Aureus agrifolia* var. *fulgens*
Very stout deep tap-root

- *Rhus diversiloba*, tap root
2 inches thick rising into a
dug stem of similar thickness.
Before bark was cut away
may have ascended like

- *Heteromeles arbutifolia*. Stump-
sprouts freely when cut off.

- *Umbellularia californica*. covers the east slopes, locally, of upper San Leandro Cañon, in dense clumpy many stemmed fashion, huge bushes really. The traveler from Humboldt or Mendocino finds this cañon side growth very strange. He is used only to trees in river bottoms.
- *Pinus Furbiculata*. The tallest trees on Moraga ridge are 20-25 ft. high. The largest trees are always, I think, or at least commonly, with branched axis. The ^{much} top is often contorted or crooked much-branched like *Pinus contorta* of northern beaches. Low branching is often seen.

This is very characteristic of the species in this place and I am skeptical of the figures for great height given for this species by Lemmon.

- *Rubus vitifolius*. Stems 10 to 15 feet long, one-year-old canes, white as frost, in bottom of Kohler Cañon, forming a dense tangle - Oakland Hills.
- *Camothus sorediatus*, shrubby - sprouts 1.5. from root-crown. rather vigorously. One "tree", trunk 4 1/2 ft. h. and spreading crown 4 ft. more. [see p. 58]
- Along trail summit of Oakland between Redwood Peak and Kohler (Hills) Pass, east slope just below ridge summit, in clearing the trail, the following facts were

noted in the clearing made
along the trail:—

Vaccinium ovatum, stumps
sprouts very numerous.

Arctostaphylos andersonii,
killed outright by the
ex. 2, even when cut
high up! One "stump"
4 ft. high did not
sprout! no. 5715

Arctostaphylos manzanita,
this, right alongside
no. 5717.

Castanopsis chrysophylla
var. *minor*. Stump-
sprouts very freely.

— *Heracleum lanatum*. In
a torrential stream bed in
sharp canon high up eastern
side of Oakland Hills we
found gigantic rootstocks

in the flood debris on the
sharp descent. They were 8 to
14 or 16 inches long, 2 to
full 4 in. thick! and with
"gigantic" scars on upper side,
representing stalks of
successive seasons growth.
They were like elephantine
limb of the valley rootstocks
see no. 5716.

no. 5714. *Dirca occidentalis* Gray.
Stamens 8, exserted, the 4 alt.
shorter. Calyx cleft nearly
to base of throat but ending
distinctly above base. Cleft
Very showy in the bare brush
in moist swales near top of ridge
on eastern slope. calyx-lobes crenulate
a little.

no. 5715. *Arctostaphylos*
andersonii ^{Gray}. See note on p. 54.
Flowers drooping but closely &
regularly compacted in the cluster

- No. 5716. *Heracleum lanatum* ^{Michx.}
See X sect rootstock.
p. 54. Spm. for herb =
Whole rootstock sent to
U. S. Museum.

- *Dirca occidentalis* Gray.
No. 1 - 8 ft. 2 in. h; 4 in. diam. at
No. 2 - 7 ft 7 in. h; 1 ft. 1 in. ^{1/2 ft. above} ground.
circ. at
3 inches above g.
Feb. 8, 1914

Oakland Hills, head of San
Leandro Creek; near Thorn ^{rocks}

- No. 5717 *Arctostaphylos*
glandulosa ^{Eastw.} Stump-sprouts.
Oakland Hills. This grows
on the yellow shale, same
formation as Moraga
Ridge.

- No. 5718. *Arctostaphylos* ^{Michx.}
glandulosa Eastw.

- *Arctostaphylos*, no. 5711.
See p. 48. Mr. Matthews
brings in material of
Arctostaphylos glandulosa,
i.e. same ^{sp.} as on Moraga
Ridge, Oakland Hills, &
North Berkeley and says
it stump-sprouts vigorously
on Mt. Tamalpais. He
also brings in good *A.*
canescens ^{mt. T.} and says it
does not stump sprout.

- *Baccharis pilularis*,
commonly 8 ft. h. in Kohler ^{Canyon}
- *Garrya elliptica*, 12 ft. h.
Oakland Hills.
- *Arctostaphylos andersonii* Gray,
16 ft. h., 3 ft. 9 in. circ. at 1/2 ft.
above ground. Rather fine tree,
cleared around, on east slope near
summit a little S. of Kohler Pass

- *Beanolhus sorediatus*. See p. 53.
W. M. Mathews, Bot. 112 says this
species is killed outright by being
cut off on Mt. Tamalpais.

- *Japsonia heterandra* ^{Eastw.} Has been
sent in from Columbia, Toulum-
ne Co. by Mrs. Adele L. Grant.
See her letter of Nov. 1914. Fresh
flowers: petals white, $2\frac{1}{2}$ lines
long, elliptic, ^{not} _{2 to} subacute. Calyx-
lobes veined. Stamens 10, little
more than half as long as the
calyx-lobes. Petals drawn down
to a distinct stipe or claw
one-third line long.

Harriet A. Walker: Coll. dates.

1908, June 23, Blue Canyon.

No. 5719. *Arctostaphylos* ^{glandulosa Eastw.}
^{var. Cushingiana (Eastw.) Adans.} ~~Marzoukii~~
Trail to Muir Ridge from mill
valley, reservoir, along cleared
strip. Ovary white-hairy. This
corresponds with the slopes of mt. + is the
dominant species.
No. 5720. *Arctostaphylos* ^{gland-}
^{var. Cushingiana (Eastw.) Adans.} ~~Marzoukii~~ ^{ulosa Eastw.} Near fire-

burned crowns 8 ft. broad
and 3 to 5 ^{ft.} across. One
example a crescent-
shaped affair! This one drawn
by Miss Gibeby. See vol. 27, p. 146.

- Stump-sprouting.
Dendromecon rigida
Heteromeles arbutifolia
Corylus rostrata

- *Beanolhus chrysiflorus*
2 ft 6 $\frac{1}{2}$ in at 4 inches
2 ft 2 in at 2 feet -
16 ft. high. On pipe-line trail.

- *Arctostaphylos glandulosa* ^{Eastw.}
6 ft. 6 in. x 5 ft. circular
crown. Woody knots or
quarls lying irregularly
along surface of the
ground. Looks like turned
chunks of wood lying partly
buried in soil and
irregularly disposed.

Near the above was another
circle, 8'-7" x 5'-8" very
perfect on hillside; the
two cases cited with numerous
others on slope above
Pipe Line Trail just beyond
bushes over Mill Valley branch
railroad, perhaps 100 yards
beyond. No. 5722.

- This day with Bot. 104 to Tamaulpa.
Matthews, Collins, Smith, Miss Peacher,
Turner, Goldsmith,

S. californicum Greene.

- No. 5721. *Eriodictyon glutinosum*.
DR. Stump - shrubby - i.e. root-crown.
↑ from

- No. 5722. *Arctostaphylos glandulosa* ^{Eastw.}
var. *californica* (Eastw.) Adams.
Ovary pubescent or hairy. Filaments ovate-
lanceolate dilated, hairy - scattered.

Cf. No. 5720. This from ^{near} shrub drawn by
Miss Gilkey; to verify species. [with globose crown]

- No. 5723. *Salix scopulorum* ^{var. *flavescens*}
of *S. Scouleriana crassifolia*... det. C. S. L. P.
Trees, slender, 12 to 14 ft. h.

- No. 5724. *Arctostaphylos* ^{sensitiva Japan}
ovary densely hairy like next. Fil. slight
disk of separate glands. Pipe Line Trail. hairy.

- No. 5725. *Arctostaphylos canescens*
Eastw. Leaves whitish canescent.

Ovary covered with a dense coat
of short white hairs, therefore fur-
like like the coat of a white car.
A purple narrow disk as base for
ovary. Sepals thin, whitish,
spreading, very short-hairy at tip
on upper side. A few plants
only by rd. back on straight trail
to summit. Filaments rather over

densely hairy in a tuft at top
of the ^{abruptly} dilated globose base.

no. 5726. *Corylus cornuta* var. *californica*
Garnated tip to catkins.

(*glandulosa* Eastw. not A.
- no. 5722 -)
- *Arctostaphylos* *manzanita*.

Its slender stems form
a dense thicket. When burned
the surface litter is also
more or less consumed.
When rains follow there is
free erosion. As a result
the root crowns by and
under are exposed and
shar as described on p. 60.
The term "*A. manzanita*" as
used for Mt. Tamalpais and
Moraga Ridge of preceding pages
rests on no. 5722 and other
specimens recently coll. + so labeled.

- *Arctostaphylos* *munimularia*
Shallow rooting system.
tap-roots small and not deeply
seated. It was no trouble
with my ^{botanical} pick - to uproot -
a shrub 5 ft. high!

- *Leucanthus* *thyrsiflorus*.
Mattheus, W.B., refers to
its shallow rooting system,
that its stems can be
pushed over, where they
grow tall in the Men-
dozino forests, and that
the stems are always
more or less leaning in
a state of nature.

- *Pickeringia* *montana*,
a cut in the railroad
exposed about 5 ft. of the
taproot. The upper portion
for about one foot (within the
soil) was covered with soil.

root-crown and stems above it of course, a part of the ~~brush~~ ^{whole plant} (the whole plant was alive), this upper portion of root was covered with soil; the tap-root below that point had been uncovered by the cut for the railway bank and the whole of this exposed portion of the tap root (which was about one inch thick), was sprouting freely, as if feathered all the way down!!

In places on the fire-lanes we find slender roots 4 to 5 feet long running along the surface of the ground; they appear on investigation to belong to *Pickeringia montana*.

21 Feb. 1914.

- *Oxalis oregana*. Stems used in making pies at Ft. Bragg as a substitute for rhubarb.
- W.C. Matthews.

- *Arctostaphylos montana*, said by A.E. Wierlander to layer! Mt. Tamolpais. It does (W.C. J.).

- We have been out in the rain all day and I am as wet - for it has rained with considerable violence - as if thrown into the bay. W.C. Matthews, with me, is very wet also.

- *Adenostoma fasciculatum*.

Took up a whole plant. The stems were no larger than quills, but they arose from old root crowns 5 inches broad!!

No. 5727. *Pickeringia montana*.
Stump-sprouts. (material thrown away)

Vacaville, Feb. 28 - 6 Mar.
1914.

The country is very beautiful.
The streams are very full,
both the Alamo and Natis.

The hills are very green and
it is a grand sight to see
the solemn valley oaks, fall
and black and naked of
leaf, rise out of the green
fields, & contrasting so
wonderfully with the delicate
green sward below.

- Fremont's Poppy. This
name is given me by Dr.
Davis Joz, Dentist, S.F. for
a bush with white
flowers and yellow center
(anthers) in S. Sierra,
above Linn Cove. might
be *Carpentaria*? - Probably
Fremontia californica. See his letter
of Mar. 20, 1920.

Berkeley, Sept. 1914.

(on drainage by
on the

- *Torreya californica*, quite
slope Patterson Mt., quite
common - A.E. Wieslander,
1914. Fresno Co.
- *Leonothus parvifolius*, common
near McKinley Grove Big Trees
on or near Deer Creek,
Fresno Co. - A.E. Wieslander
- *Leonothus diversifolius*,
S. slope Patterson Mt.,
Fresno Co., A.E. Wieslander
- *Arctostaphylos mariposa*
Dudley. The flowers are sticky and
stick to your clothing as
you pass through the
shrubs. - A.E. Wieslander
Ockenden region.
- *Arct. glandulosa*, the leaves
are much more sticky
at high alt. on Mt. Tam.
than lower down. - A.E.
Wieslander.

— The question has been put to me about difference in sentiment towards the two groups of early scientific men and explorers in California. ^{I answered:} We were the men of ^{Allen} Kellogg. He was a Californian. The state was to him natural, lovable and familiar. So Bolander, Bloomer, Gibbons and the rest. But Brewer, Whitney, King and the rest were different. They came here with different feelings — feelings of superiority, of patronage, of condescension. To them the state was wild and untamed, it was crude and unnatural. It was not and could not be to them home. They were always aliens.

- Lemmon, J. G. On Mt. Lyell, Aug. 19, 1878. See his printed label sub *Calyptridium nudum*.
- *Martynia proboscidea*. Brought from Ignacio Valley n. of Walnut Creek by Mrs. Kate J. Stirling. Says it grew freely amongst the corn and melon plants.
-
- *Ribes*. I have been fussing with the Californian material. The species-makers have hit hardest *Ribes menziesii*. Some of the specific segregates will have to stand but many are quite worthless and not even of varietal value. *Ribes hystrix* Eastw. is maintained by Cov. & Britt. on the ground of its aciculate glands on under side of leaves and yellow spines. But *R. menziesii*

from Pt. Reyes and north has glands
of every length or almost ^{no glands}
at all. My "gibbering grade, 6/
16/'96" has yellow spines and
the glands are very long-stalked!
more prominently long-stalked
than in most Marin Co. spurs.

The leaves are thick in
R. hystrix but so are they
in Blasdale's Olema spur
which is excellent menziesii.
R. sericeum differs from R.
menziesii only in being thin-
leaved and somewhat silky
pilose.

The R. menziesii aggregate:
(a) of the ^{typical} coast thing, (b) the
plant with ^{stiped} almost
tessellated ^{short-}ovary which we
have called R. subvestitum
and (c) R. californicum which
has quite glabrous bristly

ovary need to be checked up against
the real types at Kew.

Record of Drawings

- *Lewisia cotyledon.* x $\frac{1}{2}$ Jepson 2817,
Shalkelford Creek
- *Eremochloa rixfordii* x1. Purpus 6032.
- *Lewisia nevadensis* x1. Jepson 4565.
- " *triphylla* x1. " 4098.
- *Montia gypsophiloides* x1 " 4223.
- *Stellaria longipes* x1 " 4928.
- " *Jamesii* x1 " 4324.
- *Silene auntantia* " 4646
- " *pectinata* " 5762
- " *bernardina* (Upper Hall River)
- " *occidentalis* Hall + Bab. 5142
- " *aptera* " 8709
- " *waterii* " Bab. 5638
- " " Jepson 4559a
- " *petal.* Hall 9349.
- " *lemmingii* Jepson 4260.
- " *platygota* *petal.* " 2313
- " *vercund.* Tidestrom 56.
- " *grandis* Eastw. Bodys Pt.
- *Eremochloa rixfordii*, fl. x20 Purpus 6032
- *Achyrocline cooheri* x1 Jepson 6053
- " " flower x20 " "
- *Calandrinia menziesii* Jepson 520
- " x1
- *Silene californica* Tracy 2502
- *Claytonia perfoliata* - Jepson
 Ross Valley, Mar. 23, 1896.
- All drawn by Miss H. M. Gilkey.

No. 5727.

No. 5728.

No. 5729.

Record of Drawings.

- *Arctostaphylos andersonii*. XI
Oakland Hills. 2/9/14.

Look up spms.

- " *glanchulosa* Eastw. Drawn
from spms. on Pipe-line
Trail, Mt. Tamalpais, Feb.
14, 1914.

Physiological Bilabiation

See p. 83

- cf. *Hugelia eremica* Jepson.
- cf. *Clarkia pulchella*, F.B. 45:
43. (No. 12, 233).
- *Streptanthus* species are irregular.
S. polygaloides has the upper sepal
larger than the lower, and the two
lateral quite smaller*. *S. secundus*: calyx
as if 2-lipped, the 2 upper sepals
approximate and larger than the
2 lower (see Fl. Cal. diag.) *Eulisia*
niobaea Greene, Lft. 1: 83, "calyx bilabiate".
E. elatior Greene l.c. 84 "bilabiate calyx
and corolla".
- *Isomeris arborea*. F.B. 46: 249.

* Lower 3 petals spreading, the upper one
erect.

- Mo. Bot. Gard., St. Louis . . . ^{Spms.} 55.
 Dr. A. Brand, Frankfurt, Germany . . 41.
 Heer Seeman, Germany . . . 15
 Dr. Engler, Berlin . . . 20.
 All the above sent

Dec. 20, 1902.

Henry cypress 10.
 at Dublin, Nov. 1909.

Prof. Sargent, cypress, Oct. 1911 . . . 10.
 Arnold Arboretum.

Cult. Trees - Spontaneous
Reproduction.

- *Cupressus macrocarpa* - a little at Berkeley.
- *Eucalyptus globulus*, a little at Berkeley.
- Certain shrubs, such as *Ulex*, *Cytisus*. See Greene, Fl. Fr.
- *Ailanthus glandulosus*, root sprouting: St. Helena
- *Populus alba*, " " Berkeley, etc.

T. W.
 Cf. Letter of Adams, 1914
 " article by " in *Lyttelton Times*, Nov. 23, 1914.
 (See Cult. Trees file sub Adams.)

- Cont.

- *Ailanthus glandulosus*, reprod. in thick stands by seed in Pleasant Valley! (Aug. 1916). in a cultivated orchard.
- Also acting like a weed on the Tail-
 place near Vacaville but Neat Tail-
 says by sprouting only (Nov. 1917).
- *Tamarix indica*. Schachapi Pass and elsewhere. See index F. B.
- *Amygdalus communis*. I notice more spontaneous seedling trees at Little Oak and in the neighborhood. The stand is noticeable - though of course the individuals are few - because in this dry land trees never grew naturally on the plains. - Vacaville, July 11, 1927.

Life History Notes.

Suggestions for a Field Book
to direct interest to:

- *Epilobium*, peculiarities of development, irregular flower of *Chamaenerium*.
- *Delphinium decarum*. Note the first or second year orbicular entire lobes of leaves on young plants which produce no stems in the season! Cf. Marysville Buttes Spms! Recall leaves of *Marsilia*?
- *Fritillaria lanceolata*. Its earliest or first year ^{basal} leaf, so strikingly different from the leaves of its flowering stem.
- See notes on two (dimorphic) flowerings in one year: 29:160.
- See notes on dimorphic branches
- See also p. 84.

See also p. 75.

- Physiological Inhibition of
morphologically regular flowers:

1. *Odontostemon hartwegi* - 5 stamens arch above, one below, very marked.
2. *Clarkia concinna*. See Fl. W. Ind. *Epilobium*. See p. 82. Cal.
3. *Streptanthus*.

Petals sometimes tend to approximate in pairs on upper and lower side.

4. *Cleomella obtusifolia* Torr. ^{officinalis}. All 4 petals turned to upper side, as 2 spreading horizontally right and left. Fl. B. 46: ²⁵⁴V
5. *Clarkia pulchella*. See drawing made at Dornington.
6. *Adenocaulon bicolor*. Cf. Field Book, vol. 40, p. 90.
7. *Gilia virgata* var. *eremica* ^{Japsum}. Cf. Fl. B. 54:14
8. *Gilia mathewsii* Fl. B. 27:33. Also see all other nos. of spms. in this sect. *Gilia* (*Langloisia*).

Life History Notes (see p. 82).

- *Allium atrorubra*. Its production of bulblets on a slender or thread-like offset. See Jones, Contrib.
- *Lepidium latipes* Hook. See erect form 1 ft. h., Hoas Slough, Solano Co., 6 July 1891, W. L. Jepson. Undoubtedly forced up by competition with grassy growth. See herb.
- *Ceanothus cuneatus*. See p. 189. Notice the stipules and their character, see Jepson no. 4710.

Parallel Variations

cf. Simulations, p. 168.

- *Diapentemum crassicaulis* (Caulanthus) } Inflated stems.
- *Caulanthus inflatus* - commonly inflated on the Mohave, not so apt to be in the upper San Joaquin.
- *Eriogonum inflatum*

- *Trillium*

- | | | |
|----------------------------|---|--|
| Large flo.
- sessile | { | Leaves sessile - <u>T. sessile</u> |
| | | Leaves petioled - <u>T. petiolatum</u> |
| Small flo.
- pedicelled | { | Leaves sessile - <u>T. ovatum</u> |
| | | Leaves petioled - <u>T. rivale</u> |

Cont. from p. 85.

- *Brodiaea*

- A. { Perianth. tube cylindric
or oblong *B. congesta*
- B. { Perianth. tube constricted. *B. multiflora*
- B. { Perianth. tube Hmg. *B. minor*
- B. { Perianth. tube constricted. *B. purdyi*

- *Selinocarpus chenopodioides* fruit
look like the fruits of *Selinum*
Pacificum or *Angelica tomentosa*.

- See Hall, *Agaveis heterophyllum*
Fl. S. Cal.

Cont. from p. 85.

- *Allocarya*

- { Scar. ovate.
Nutlet finely transverse-regular
- { Scar. linear.
Nutlet finely transverse regular.
1. *A. scalpta*.
2. *A. undulata*.

Leuchocarpae. - Scar basal but oblique
Nutlet lanceoloid, regular, flat on
back 1. *A. ambigua*.

Stipitatae. - Scar ^{roundish,} exactly basal.
Nutlet as in no 1. 2. *A. stipitata*.

There are other cases. cf. F.B. 38:64

- Legends of Californian Plants
Californian Herb Lore. (Erythra,
1:190, 231. 2:9, 39, 162.)
- Cal. Plant Legends (Mrs. Chandler)
- Hupa Legends. See Soddard's
Papers.
- Legend of the Straight Man-
zanita Stick. cf. Index.
- Legend of the Snow Plant.
\$10000 fine for picking.
cf. also Mary G. Clark in litt.
May 29, 1918 (filed with spm.).
- There are two Buckeye rains each year,
one when the buckeyes bloom, the other
when they shed their leaves. - Bella
Vista, folk lore. Cf. Ames in litt, May
30, 1918.

- Water Plants and Water Indicators
in the Desert.
cf. F.B. 6:101 (Cotyledon laxa, 1349).
cf. Maidenhall, Desert Watering Places
p. 20.

Physiological Bilabiation

S. cont. from p. 83.

See also F.B. 25:175

" " Fl. Gal., Capharidoceras.
(Isomeris and Cleonella)

David Douglas.

- List of Plants Coll. in California. Those starred = new species. -

- *Ericameria ericoides* (D.B. Prodr. 5: 346).
- *Senecio douglasii* D.B.

- *Fritillaria liliacea* Lindl.

- *F. nutica* Lindl.

- *F. biflora* Lindl.

All these *Frit.* in Bot. Reg. sub. t. 1663.

- *Allium falcifolium*^{H+A} Watson, Bot. Cal. 2: 151, says Sonoma, Douglas. Douglas could not have collected it elsewhere than north of the bay so far as we know its distribution, and he most probably obtained it in the Hood Peak Range where it should be looked for. But if the Douglas also gives a special locality, it is an exception!

- Douglas, D. Journal of his travels in N. Am. 1823-27. Appendix containing List of Plants introd. by Douglas. & an account of his death. Edited by W. Wilkes, Sec. R. H. S. 1914.

- *Mentzelia lindleyi* S. & G. was first coll. by Douglas. As we know it nowadays it grows only in the cañons of the Mt. Hamilton Range from Niles Cañon to Mt. Diab. Douglas could well have had it in that district on a trip from the Santa Clara Mission or from San Jose.

↑ Mission
- *Holozoria filipes* (H+A.) Greene. We know this today (except for Sierra foothills) only from Mt. Tamalpais, Howell Mt.; Marin Co. (Syn. Fl. 1: 313).

- *Phacelia phacelioides* (Benth.). I believe this to be a Douglas plant. If so, it is an argument for Douglas having visited Mt. Diablo, though he might have got it on Mt. Hamilton.

- *Thelypodium flavescens* (H+A.) This is likewise an argument for a Mt. Diablo trip.

- *Astragalus douglasii* Gray nests on a Douglas plant. In its typical form it occurs only in the inner part of the South Coast Ranges, tho. it gets near the coast, perhaps, in Anaceto Cañon, San Gabriel Mts.
- *Astragalus leucophyllus* T. & G., is strictly of the Inner Coast Range, but in the Mt. Hamilton Range comes as far west as the hills between Mission San Jose and San Jose Valley. Douglas might, without moving far from the Mission establishments collected it near Sunol. But, it is at Bicknell, n. Santa Barbara Co. ! Jepson 12, 673, right on the Mission trail.

- McLean, F.P. *Astragalus whitneyi*. Sheet 13, 477.
 Congdon, J.W. " " 81, 287.
 Kennedy, P.B. " " 129, 541.
 Hall, H.M. " " var. *pinosus*. 69, 093.
 Purpus, C.A. " " 124, 336.
 Dary, J.B. " *Rookerianus* 13, 373.
 Soune, C.F. " " 82, 670.
 D.C., frequently means Daniel Cleveland.
 Austin, Rachel M., *Viola canina* (Tepson hb.).
 Hardy, M.M. *Convolvulus fulcratus*, 3 sheets,
 Hot Spring Valley, Baker & Nutting; Fall
 River Valley, Baker & Nutting; Lava Beds,
 M.S. Baker.
 Brandegee, T.S. *Euphorbia parryi* Engelm.
 Devils Playground in drifting sand
 near Kelso. June, 1915. K. Brandegee.
 Purpus, C.A. *Astragalus purshii* var.
lectulus Monarches Mchus.,
 Tulare Co., Purpus 1853.
 McLean, F.P. *Ceanothus crassifolius*
Astragalus purshii. State
 Survey, no. 783. Sheet 13, 454.
 Gilbert, Mrs. E.J. *Pozogyne serpylloides* Bth.,
 Berkeley (Chamisso Club).
 Hardy, M.M. *Collomia grandiflora*, Badger
 Creek, Ore., M.C. Wilson, July, 1893.
 (Or is this writing E.J. Gilbert).
 Gilbert, Mrs. E.J. - *Gilia intertexta* Harold-
 burg, June, 1897. Alice King. (Species
 name and author not Mrs. G.).
 - *Gilia gilivides* Jackson, Amador Co.,
Kitchener & Bioret. Aug. 1893

- Gilbert, Mrs. E.J. *Phacelia distans* (Lohled P.
Tomacatifolia). Sheet no. 24, 472.
 Coll. J.A. Sanford.
 - Brandegee, K. *Piptocalyx dichotomus*
 Greene. Franktown, Nev. July 23, 1911
 Sheet no. 155, 234.
Krynitzkia dichotoma Andrews
 Camp, mte. w. of Bishop. 1873
 Sheet no. 174, 928.
 - Gilbert, Mrs. E.J., *Myosotis palustris*
 Sheet 24, 451. Leominster, Mass.
 - *Muscinecia copelandii*. Sheet 24, 067. Honey Lake Valley,
 M.S. Baker.
 - Hardy, Mrs. M.M. *Lappula nervosa*.
 det Greene. Placer Co., 1893.
 - Gilbert, Mrs. E.J., *Cryptantha angustifolia*. Sheet 24, 656.
 - Purpus, C.A. *Limnanthus dichotomus*,
 Springville.
 - Lemmon, J.G. *Limnanthus dichotomus*
 Ft. Mohave, Ariz.
 - Gilbert, Mrs. E.J. *Lithocarpus densiflora*. Sheet 5588.
 - Dary, J.B. *Lithocarpus densiflora*.
 Sheet 5552.
 Sheet 5556.
 - Albert Kellogg *Lithocarpus densiflora*.
 Sheet 5550.
 - Hardy, Mrs. M.M., *Veronica scutellata* L.
 Goose Valley, Shasta Co., Baker & Nutting
 Sheet 27692.
Collinsia bicolor, Sheet 26, 570 (with
 break).

- Mrs. E. J. Gilbert. Sheet 26,564. Col-
Linna bicolor. Vacaville.

- *Castilleja rubida* Piper, Wallama W.B.
 " *rustica* " "
 " *oreophila* var. *arborescens*, " "

100

July 5, 1875.

Edw. Palmer

- Tigh's, s. part of San Diego Co., Pentst.
 emon *cantharidifolia* Bth.
- June 25, 1875. Jamul Valley, sw. San Diego
 Co. *Pentstemon cordifolius* Lindl.

Numbers

101

Parish, S. D. 25xBrandege, T. 25x, 25y.

K. Brandegee - Collection
 See pp. 121, 135, 144, 107. Dates

1884

- May. Kelseyville, Lake Co. *Plagiobothrys*
 Lakeport, " " *tenellus*
- Aug. Truckee (*Plagiob. hispidus*.)
- June. Waterman's (Barstow). *Liranthus*
arenicola (Jones).
- June. Aubrey. *Heliotropium californicum*
greenei.
- June. Bartlett Mt., n. Lake Co. *Collinsia raltani*.

1913

- July. Mammoth, Mono Co. (*Collinsia torreyi*).

1915

June. China. (*Verbena gooddingii*).

1914

"Ellis Meadows, Tulare Co.", in Mrs. Bohland. Bartst.
aurum laetum.

1911

May 15. Bamwell. (*Verbena gooddingii*).

1909.

June 7. foot of John grade. (*Verbena prostrata*).

K. Brandegee - Collection 103
Dates.

1888

- June. San Juan. (*Crypt. jonesii*)

1889

- June 17. San Leonard. (*Crypt. jonesii*)

1885

- Salinas River (*Crypt. jonesii*)
- April Antioch (*Plagiob. tenellus*).

1888

- July. Sisson. (*Plagiobothrys hispidus*).

1896

June 6. Cuyamaca. (*Allocazys californica*).

1905

- May 17. Tehachapi Pass. (*Crypt. oxygon*)
- July 21. Fresno (*Verbena prostrata*).
- June 17. Batw. Alpine + Viçosa (Antioch. *constricta*).

- *Radicula sphaerocarpa* in Cal. acc. Britton, 2:161.
- " *obtus* " " 2:161.
- *Kallstroemia grandiflora* in Cal. acc. Rydberg N. Am. Fl. No spec. at N. Y. Bot. Gard. acc. M. A. Torr in litt. 1932 or 1933; none at Washington (Nash 149.) acc. F. H. Kearney.
- *Gaillardia aristata* in Cal. acc. to Piper. Howell.
- *Arabis ludoviciana* C. A. Mey. St. Loma acc. syn. fl. (D. Cleveland). None in U. C. hb. I suspect misidentification, or a causal admixture.
- *Parkinsonia aculeata* by Dayton in Important Western Browse Plants, p. 79. I wrote him, about 1931, but his letter was unsatisfactory. He knew of no definite station in Cal. and appealed to the vague records of the early southern surveys.
- *Hoffmannsaggia drepanocarpa* Gray. Attributed to Cal. in Wootton & Standley Fl. N. Mex. 333. I wrote to Standley about 1921 - or maybe several years earlier or later, but never heard from him.
- *Pinus edulis*. Attributed to Cal. by J. C. Nelson, but his letter in reply, while pleasant, did not help.
- *Asclepias cryptoceras* Wats. Attributed to "Cal." by Rydberg, Rocky Mt. Flora. Cf. F. B. 36:164. See letters from J. K. Small and W. R. Maxon in 1934. Not in Cal!

- *Phacelia gymnoclada* Torr. Attributed to "California" by Tidestrom, Fl. Utah & Nev. It does not appear to be in Cal. The early records are in the West Humboldt mts., Winnemucca (Lemmon), Truckee Mts. (east of Pyramid Lake) and Truckee Pass (near Truckee River). The two latter have nothing to do with present-day Truckee sta. in Cal. Gray says eastern California but he was ignorant of geography; so does Brand (Pfl. Z.) who is also ignorant of our local geography. Tidestrom follows Gray or Brand. It is possible the species occurs in Mono or Inyo counties, since Duran got it in northern White Mts. (in Nevada).

- *Tellima affinis* Bol. Grew at Little Oak along the East Lane on ditch banks. Perfectly open country - but on the north side of banks. I do not associate this species, ever, with plains, but with shady or wooded canyons or mountain slopes.

1907.

June 30. *Diplazium glutinosum*.
Bohinas Bay.

1909.

May. *Sargus* (*Antirrhinum coulterianum*).

June 9. Quins Trail, Santa Lucia Mts. *Cordylanthus rigidus*.

1910.

Aug. 3. Ravenna. *Cordylanthus rigidus*.

Aug. 5. Kenville. *Castilleja linariaefolia*.

1914.

Sage Hill.*

Collinsia Fournetii.

- Palmas Co., = Plumas Co. (Engelm. Bot. Jahrb. 37:75)
- "Dona Ana Co. = Santa Ana Co. (" " 37:78)
 [↑] "be"
 Perhaps this way be Dona Ana Co. in
 New Mex. for there is such a Co. in
 that state.
- Ydquina Bay = Yaquina Bay. (" " 37:84)
- Kirk's Pass for Kirker Paso. McDermott,
 Trifolium p. 304. Many more in
 this book.
- Bises sta., Tehachapi Mts., on label Astragalus douglasii. Coll. by W. R. Dudley. Perhaps this
 = Biorell sta., S. Kern Co.
- San Fernando, Cal. is plausible on the label
 of Astragalus douglasii var. globosus
 Jones, Brundage Herb., but it really means
 San Fernando, Lower Calif.
- "Tinkers Knobs" = Tinkers Knob. N. Am. Fl.
 24:341.

- Engelm. Sprinkl., 4:36:25. Note genus name
 34 in key and diagnosis.

- Piper Herbarium, purchased by state of Washington. Proc. Biol. Soc. Wash. 41: 1912.
- cf. 26:191, 199. 39:19, 102. 38:188, 192.
of this set of Field Books.
- Dr. E. J. Durand, whom I knew well when I was a student in botany at Cornell, developed a large herbarium of dicotyledons. He was at Cornell as an officer, at Missouri State Univ., at Minnesota State Univ. (chairman of dept.), where he died. His herbarium (12,000 spms.) was purchased by Cornell. Cf. Sci. 57:298.
- Cf. F. B. Mar, 1928, vol. 46, p. 167.
- Private Hepatic Herbarium of M. A. Howe made in Cal.* sold to Miss B. C. Haynes in 1909; by her presented to U. Y. Bot. Gard. in 1915. Cf. Sci. 42:689.
- Professor Dence Fink, labored at lichens at Miami University, Oxford, Ohio. Sold to Univ. of Michigan (cf. News note in Science, 19 Apr. 1929).

- Dean E. D. Merrill brought ^{to Cal.} from the Philippine Islands, where he was employed in the Bureau of Science as a government employee, a perfectly enormous private collection, perhaps 200,000 sheets! Cf. F.B. 50:46.
- See ante 14:178.
- See index no. 3 of Field Books under Herbaria.
- S. F. Blake, while employed in U. S. Bur. of Plant Industry, wrote: "I shall keep some for myself." So he apparently has a private collection. G. Jepsen Corr. vol. 26; p. 479; copy of letter from Blake, S. F.
- Cf. Harold St. John's Herbarium (F. B. 57:17).
- Cf. "Men and Manners" notebook, vol. 11, p. 132.
- Harold St. John. Notes on Botanists of Cal. rev. Ann. 2:92.

* while an officer of Univ. of Cal.

I said to R. W. Pearson, apropos of Miss Laura McDermott and Dr. P. B. Kennedy: There is no reason why two investigators should not work on the same group at the same time so far as the interests of botanical science are concerned. Nor need they fear each other! Their work, if it is truly original and independent will not duplicate the one the other. It is impossible, practically. — May, 1927.

^{to duplicate,}
One reason for the sensitiveness is jealousy as to possible new species or new combinations.

- Glory Hole Cañon, opposite Redwood St.
- Church-bush Cañon (Claremont Cañon, mll up)

There is developing recently a strong, a marked tendency to perpetuate all clerical errors, printers errors, errors of ignorance, sacredly and of course solemnly. It is seen in all sorts of ways. Data on labels is never edited.

1. Grant, Monog. Minnuna, p. 278. One would think the various "Lilaeon" stations were different localities!
2. *Porterella carnulosa* Fenzl. Evident misprint for *carnasula*; but why does not Rydberg, say, keep to the original form, Fl. Rocky Mts. 826, since he is one of the school so insistent on preserving the original form.
3. F. V. Coville is the leading exponent of the sacredness of error.
4. cf. my letter to C. B. Wolf about 1939 (or 1938), discussing his *Rhamnus* paper. If there is a slip in grammar, especially the

ending of a Latin name, it, evidently, acc. to some, must be preserved.

1490. June 19. Westport, Mendocino coast.
May 13. Santa Catalina (Phacelia bolanderi).
1888. June. San Simeon (Phacelia distans).
1885. Apr. 20. Guadalupe Isl. (Phacelia floribunda).
1888. May. Calceguilla (Phacelia rathbuni).
1890. June 11. San Lomond (Crypt. jonesii).
1891. June 23. Snow Mt., Lake Co. Montia saxosa.
1891. Apr. 14. Keeler. (Cryptantha uversanthia).
July 4. Coleridge grove. (Crypt. simulans).
May 15. Kernville. (Pogon. canes.)
1892. July 4. Prattville, Plumas Co. (Cryptantha affinis). Also July 3.
June 26. Wyelford (Crypt. simulans).
* Sept 20. "Yolo" Bol. Mt. Montia saxosa.
1894. Apr. 30. San Rafael (Cryptantha uversanthia).
" " Warner's ranch (Pogon. canes.).
July 7. Canyon (Scutellaria bolanderi).
1895. Apr. 18. Borrego Spr. (Cryptantha uversanthia).
1897. Apr. 1. Cedros Island (Fouquieria glandulosa).
1898. Aug. 1. Palomas. (Scutellaria bolanderi).
1901. Mar. 30. Lycium fremontii.
1902. May 17. Ashmun 29 Palms and Baghdad.
1904. June 20. Laguna Mts. (Cryptantha antioch. nivalis).
" " El Cajon (Cryptantha nivalis).
1905. Apr. Split Mt. Lycium fremontii.

* cf. June 23, 1891.

- Humboldt Co., Aug. 1886.
- July - Aug. 1891 (Erg. salang.)
- Mt. Dana & Mt. Gibbs, July 17, 1889 (Oraba meana).
- (Polemonium confertum) (Mimulus Flemingii).
- Lake Eleanor, June 28, 1889. (Doronicum maritima).
- Lassen Peak region, July - Aug. '91 (Mimulus laevis).
- Cloud's Rest, June 12, 1889 (Macronema discoides Nutt.).
- Sugar Pine, Tirolume Co. June 20, 1889 (Streptanthus).
- Rosasco's, See Big Trees Aug. June 25, 1889.
- Arcata, July 8, 1888 (Diarella Henschkei micrantha).
- Long Mdw., Tirolume Co., July 13, 1889. (Mitella pentandra).
- Hatch-Hatchery, July 1, 1889 (Linum digyrum).
- Grimes Creek, Humboldt Co., July 28, 1888 (Cercis occidentalis).
- Graham's, Humboldt Co., June 7, 1896.
- Wheelers, Tirolume Co., June 21, 1889 (Triplaris).
- Bloody Cañon, July 17, 1889. July 20, 1889. (Cercis).
- Mt. Dana, July 30, 1887. E. P. Drew. Bryanthus fremontii.
- Cascade, Lake Tahoe. Aug. 8, 1890. (Utricularia vulgaris).
- Bloody Cañon. July 17, 1886 (Hesperis gloccosa).
The third item above must be 1886? But in this label there is room for doubt.
- Hyampum. July 23, 1888. (Gilia floccosa).
- Glen Alpine, Lake Tahoe. Aug. 8, 1890. (Phacelia purpurea).
- 1887. July 12. Lake Eleanor. E. P. Drew. orthocarpus laevis.
July. "Yosemite trip" Henschkei rubraescens. Tupper St.
- Bloody Cañon. July 18, 1889. (Phacelia humilis).
- Columbia. June 25, 1889. (Navarretia viscidula).
- Bloody Cañon, July 20, 1889 (Cryptantha parryana).

Norman Wilson
Collecting Trips.*

1893.

- June 12. Rock Spgs. *Brickellia linifolia*.
- June 14. - Mohave Desert. *Brickellia incana*.
- June 9. - Pinto Creek, Cal. *Salvia ambrosioides*.
- May - Kingman, Ariz. " "
- May 5. - Peach Spgs., Ariz. (*Chamaecarpha*
crunifera.)
- June 14. - Mohave Desert, Cal. (*Brickellia incana*)
- Apr. - Diamond Creek Cañon, n. Ariz. *Prosopis*
- June 6. Pinto Creek (*Prosopis pub.*). The printed
label = Calif.
- June 13. Mohave Desert, Cal. (*Cassia armata*).
- May 31. Union Pass, 20 mi. from Kingman, Ariz.
- June 13. Mohave Desert. *Cassia armata*. (*Cassia costae*.)
- June 9. Pinto Creek. *Hoffmannseggia stricta* Bth.
"desert w. from". Printed label = Calif.
- Apr. 1893. Diamond Creek Cañon, n. Ariz. (*Prosopis*
- Apr. 28, 1893. Peach Spgs., Ariz. (*Opuntia*
gibbiflora).
- June 1893. Kingman, Ariz. (*Glycyrrhiza lepid.*)
- Apr. 1893. Grand Cañon, Ariz. (*Balea johnsonii*)
- May 30, 1893. Kingman, Ariz., 20 mi. from. *Vicia*
arizona.
- June 25, 1893. Cañon Cañon. (*Lotus glaber*).
- Jan. 30, 1893. Needles (*Barroa tridentata*).
- June 24, 1893. Cottonwood. (*Oenothera californica*
- June 24, 1893. *Heesperia* (" *micrantha*).
- June 27, 1893. Cottonwood (*Oenothera hookeri*).
not "Shasta Co."

- July, 1893. Badger Creek, Ore. (*Lupinus aridus*).
(*Lolus douglasii*)
(*Collomia grandiflora*)
- June 6, 1893. Pinto Creek, Cal. *Lippia*
nodiflora.

* See also "Types and Orig. Citations".

p. 180.

Hansen, Geo. of also "Types and
Orig. Citations" note book,
Collecting locs. in central Sierras. p. 116.

Clinton

Sulelope

Silver Lake, 8000 ft.

Twin Lakes, 8500 ft.

Pine Grove

Carson Spur, 8500 ft.

Agui. Sta., 2000 ft.

New York Falls, 2000 ft.

Armstrong sta., 5000 ft.

Collecting Trips. See p. 102.

1883

Aug. Carson, 9300 ft. *Leptanthus*

1884

Moab, sta. 1894 *Lycium cooperi*.
San Felipe, Apr. 19.

1899

San Felipe, Apr. *Pectocarya setosa*.
found this loc. for her several times.

1892

Snow mt. Aug. 25 (*Cryptantha tarreyana*).

1896

San Felipe, Apr. 13 (*Lycium cooperi*).

1889

Apr. Epperson's, Lake Co. (*Cryptantha intermedia*).
June 21. Loma Prieta (*Crypt. jonesii*).
May. Tehochapí (*Crypt. uncinata*).

1909

May 3. Elmir. (*Allocarya stipitata*).

1913

Bishop. (*Cryptantha mohavensis*).

1905

May 16. Camerón sta. to Mohav. (*Cryp.*
mohavensis)

- Collecting Trips

He often went out to Palm Spgs., ant. San Jacinto, edge of the Colorado Desert. On the earlier trips he distributed these plants as from Agua Caliente, later putting that name in ^{desert} papers after Palm Spgs.

Parish married ^{in 1883} Miss Mary E. Bonsall. He had a decidedly British countenance and was often mistaken for an Englishman. Numerous botanists visited him at San Bernardino: J. G. Lemmon; Dr. G. B. Parry, with whom there sprang up a warm affectionate friendship; Parry was the second to visit him. Then came Asa Gray. Then Dr. Geo. Engelmann and Professor Sargent; and Pringle. All these before his marriage in 1883.

Mr. Parish for many years did much collecting for the Arnold Arboretum. In 1891 he made a trip to Fallbrook to get *Quercus*

elegantula. I have no record of all the years but down to 1866 and later he was making trips for Sargent. In 1866 he went to Laurel Canyon near Los Angeles, to Catalina Island, to San Diego. In 1919 was his last trip of that sort: he went to Campo and that general region and enjoyed the experience greatly. He was then 81 years old! He must have been after Bursera. It was his expectation to take the stage to San Diego but as the stages came in from Imperial Valley they were loaded to the roofs with Mexican laborers day after day. So he asked a man with a Cadillac, who had stopped for breakfast, to take him along, which the man did.

Some of his later visitors at San Bernardino were Skottsberg of Upsala, Dr. J. R. Rose in 1908, Hugo de Vries, A. S. Hitchcock; Forrest Shreve; D. T. McBrinnall. — From Mrs. Parish, Nov. 1928. See p. 133, seq.

- Collecting trips.

1878

Aug. 22. Mt. Dana summit (*Arva gordonii* n. pygmaea).
Apr. Mt. Diablo (*Oenothera gracilifl.*).

1879

- Pyramid Lake (Porto Camp), with Miss S. A. Plummer.
- Sept. Gisson. (*Phacelia pringlei*).

1880

- April

Colton.

1884

- April, Providence Mts. (*Hofmeisteria plumosa*).

Rattan. V - Collecting Trips.
(See also vol. 16, p. 17).

1878

- Klamath and Trinity rivers (Proc. Am. Acad. 15:50).

1879

- Humboldt Ridge (Proc. Am. Acad. 15:50).

1880

Collecting Trips.

1882

- Astragalus Rattani*, Mad River, Humboldt Co.

1883

- June 27. Calis. Three Creeks and Redwood Creek (*Astragalus sylvestris*).

1884

- June 22, Stony Creek, Colusa Co. (*Euphorbia Rattani*).
June (no day), Russian River above Ukiah (*Phacelia Rattani*).
June (" "), east of Round Valley (*Astragalus Rattani*).
June. Summit on trail to Fount's Spr. from Stony Valley (*Gilia Rattani* Gray).
June. West slope Black Butte (*Collinsia Rattani* Gray).
— Elk Mt., Lake Co. (*Viola lobata*).
June. Black Butte, Colusa Co. (*Viola sheltonii*).
June. Fount's Spr., Colusa Co. (*Solanum purpurascens*).
June. South est river, n. Lake Co. (*Phacelia Rattani*).

1886

- June. Mt. Diablo, *Campanula exigua* Rattan.
(Found later on Mt. Sanalpais by Mrs. Ewens, along with *Mimulus Rattani*). See
June 14, 1886. Mt. Diablo. *Campanula* [Fyke in the collection]
githopsidea Rattan. See type in type coll.
May 15. *Gilia ambigua* Rattan. Oak Hill, 4 mi. south of San Jose.

1890

Calaveras Big Trees
July 2, 1890.

Collecting Trips. (See p. 146.)

"Big Trees", July 2, '90 (Gilia
leptalea).

1891

Lerdo (near Bakerfield), Apr. 3 (Malvastrum parryi).
 Lone Pine. Apr. 16. Phacelia distans, P. fremontii.
 Keeler (Apr. 14) Monarda dumosa, Gilia latifolia.
 Colum Mills, May 29, 1891. Krugers Nile, May 28, 1891. (Monarda
 Snow Mt., June 23, 1891. (Hydrophyllum occidentale). (P.)
 Tunis, Cal. Co., June 21, 1891. May 28, 1891, Cramer.
 Kernville, May 13, 1891. " " "

Humm. May. 1892 fremontii.
 Alcalde, May 17. Phacelia Colum Mills, May 29 (Ceanothus
 dumosa).

General Grant Grove, July 20, 1892 (Ceanothus parviflorus).

Susunville, June 30 (Linum micran.)

Honey Lake, July 22 (Chaenactis douglasii).

Sierra Nevada, July 21 (Ceanothus dumosa). *
 " " " 1893 (Ceanothus grandiflora).
 " " " Cryptantha affinis.Mar. 27, 1893. Zapato, Fresno Co. Also Mar. 26
 (Lepidoparrium squam.)

Mar. 30, 1893, Alcalde, " "

Mar. 29, 1893, " (Oenothera gracilis)

Mar. 26, 1893. Zapato Chico, Chaenactis glabrifolia

Apr. 20, 1893. Carrizo Creek (Malvastrum humifidum).

May 17, 1893. San Pedro Martin.

May 19, 1893. 1887. (8200 ft.) Pentstemon
 antitumescens

Sierra Nevada. (Gilia capitata).

1894

Apr. 29. "San Felipe". Olneya tesota.

Apr. 18. "Balm Creek", "San Diego Co." Salvia vaseyi.

June 16. El Volcan, " " " Phacelia curvipes.

July 7. Alta [Calaveras Co.] Gilia leptalea

July 6. " " "capitata"

June 26. "San Marcos." " "

* Label dates evidently wrong since the
 could not have gotten from Sequoia hills
 to Honey Lake in one day, or the year wrong.

1892

Oct. 20. Yolo Yolo (Malvastrum fremontii). } one det
 Sept. 20. } wrong!!

July 4. Priestville (Potentilla millefolia).

July 24. Badger. (Monarda lanceolata).

July 21. Sequoia Mills (" ").

July 20. Monarda odoratissima. General Grant Grove.

July 23. Sequoia Mills (Gilia achillaeifolia).

July 24. Badger. (Navarretia

June 29. Jancaville, Lassen Co. (Phacelia ram.

June 22. Honey Lake, Lassen Co. Pectocarya ston.

June 22. Snow Mt., Cal. Co. (Cryptantha multiflora)

labeled in bond of Mrs. B.

1893

May, 9. Alcalde (Phacelia hispida). More

likely Mar. and probably Mar. 29.

See opposite.

June 22. Honey Lake. (But see July 22 opp. p. 129)

1891 (Piptocalyx circumscissus)

May 13. Kernville. Piptocalyx circumscissus.

Apr. 14. Keeler.

June 22. Snow Mt. Mimulus bolanderi.

1891

May, 9. Caliente (Phacelia hispida var.)

Apr. 4. " "

Apr. 15. Inyo. (" rotundifolia). Crypt. angustata

May 15. Hot Springs (probably those at Table River).

1895

Apr. 18. Gilia arenica

1894

Apr. 27. San Felipe. Piptocalyx circumscissus.

Apr. 28. Borrego Sprs. Callisia palmari.

Apr. 24. Lakeview, San Diego Co. (Crypt. foveata).

June 14. Julian. (Gilia carniifolia).

1896

Apr. 11. Agua Caliente, Colorado Desert. Asclep. albicans.

This is presumably the one near Vallejo.

Apr. 13. San Felipe. (Phacelia campanularia)

1897

- Mar. 24. Guadalupe Isl. (*Phacelia floribunda*)
 " 20 " " "
 " 20 " " "*Solanum nigrum*.

1890.

- July 3. Calaveras Big Trees. *Collinsia torreyi*.

1899

- Apr. 25. Near Mason's, Colorado Desert.
 (*Cryptantha angustif.*)

1891.

- June 23. Snow Mt. *Pedicularis semibarbata*.
 Apr. 14. Keeler. *Molaua breviflora*.
 May 29. Coburn Hill. *Collinsia chulavii*.
 May 10. Walters Basin. *Pentstemon lactus*.
 May 29. Coburn Hill. *Collinsia torreyi*.
 June 21. Tunis, Lake Co. " *parviflora*.
 June 23. Snow Mt. "

1894.

- May 12. Del Mar. *Antirrhinum coulterianum*.
 May 29. Nuevo (doubtless near Ramona). " "
 June 10. El Volcan. (*Collinsia parviflora*).
 July 7. Cuyamaca Peak, *Castilleja martinii*.

1888

- June. Santa Rosa Isl. *Diplazium parviflorum*.

1896

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- Apr. 1. Agua Caliente. "Edge of Desert" (*Pentstemon cleavelandii*). "San Diego Co".
 Apr. 12. Mason's [Valley], "edge of desert," "San Diego Co." (*Pentstemon cleavelandii*).

1901

- Apr. 7. Ironwood Spr. *Mimulus bigelovii* (Note that on Apr. 6, he was at San Felipe Narrows (San Felipe Gap), see p. 146 sq., which makes "Ironwood Spr." seem as if certainly Yagui Well.

1902

- May 26. Providence Mts. (*Verbena gooddingii*).
 May 27. " " (*Navarrodia antirrhini-
 fera*).
 May 15. Warren Well. *Mimulus fremontii*.

July 6. Arroyo.

1889*Collinsia tinctoria*

1906.

May 24. Near Descanso. *Castilleja martini*.

- S. B. Parish. He settled at San Bernardino in 1872. As said on p. 122 ante, he collected for Dr. C. S. Sargent. He has, very probably, the unique distinction of being the only man who never had trouble with Sargent in regard to the expenses of an expedition.

- cf. "Botanists of Cal. & W. Am Notebook", p. 60.

- cf. p. 122 ante.

- Stoddards Hall, Apr. 13, 1919.

- Vallerito, San Diego Co., June 1882. (*Fragaria californica* printed label. with W. F. Parish.)

- Antelope Valley, June, 1888 (*Aesculus californica*).

- "Santa Ana Hills, San Bernardino Co.", May, 1888 (*Apocynum angustifolium*).

she uses the locality name "Rancheria",
no name, no date, no county —
clarifying

There are or have been 10,000 ranch-
eras in Cal.

- She used for her own labels the printed labels of T. S. Brundage. Sometimes she failed to strike out "T. S." and substitute "K".

- T. S. Bravdeges puts down as the label of *Cryptantha flaccida* the indication: "Colorado Desert", a vast region. This is the only spec. of this species in U. C. Hb. from the Colorado Desert. But I suspect it is from say, Coach Valley or some similar locality, which would bring it within the range stated as Fl. Cal., that is intransmontane S. Cal.

- She is careless as to labeling. She labels her own specimen of *Sanicula bipinnatifida* as *Sanicula bipinnata* H. & A. Labels her own spm. of *Sanicula bipinnatifida* as *Sanicula pinnatifida*.

1910. June. Littlefields above Pine Ridge, Fresno Co. - (*Hemophila spathulata*).

1984. June. Reno, Nev. Hanna (aretioides) blanfordi

1911. May. Frankfort, Nev. *Phacelia* *mayi*
ellantica. (Mrs. B. writes this on
a California label).

Apr. 30. ^a Caliente. (*Phacelia hispida*).

1884. May. Mountain House, Colusa Co. (Amsinckia)

1889. July 3. (Cryptantha flaccida) ^{coll. J.} Leesville.
Aug 24 " " " " "

1899. { Apr. 24.
Mason Valley, Colorado Desert (Cuy.)

taughta desipiens). I am
doubtful that Mr. B. was ever
here; Mr. B., yes.

1906, July 16. *Gilia carnifolia*. Betw. Julian and Canyon

1907. May. (*Cryptantha flaccida*). Summit
Sept. *Lathrop. Verbena bracteata*. Creek, 8000
ado Co.

1912. July 16. Russell sta., (sr. of Mojave
sta.) Mohave desert. *Verbena bracteata*.

1916. Goshen. *Psidium rivularis*
May 9.
May 8. *Psidium roseblatti*.

1917. Apr. 28. Modesto. *Bursus nortellata*.

-Tollon. Also spelled Toyon. What is the origin of the name? It is a name widely used in California for *Heteromeles arbutifolia*. Cf. Zelia Nuttall, in litt. 31 Aug. 1888.

-Islay. There is an Islay Creek near S.F. This name is used widely for *Prunus ilicifolia*.

- Mt. Dana, July 30, 1887. *Radicularis* ^{attollens}.
- Hopkins Mtns. near Clouds Rest, July 13, 1886. (*Castilleja breweri*, prob.)
- Mt. Dana, July 17, 1887. *Mimulus tilingii*.

- Sailed from Falmouth, Apr. 1, 1791.
- Vancouver speaks of deserters, vol. 3, p. 336 of his journal. On p. 334 he describes his expedition to the pinnacles east of the Salinas River. Mr. Swaine goes to Santa Cruz after fresh vegetables, Nov. 27, 1794.

- July 9, 1880. Contra Costa Co. (*Eryngium* ^{*Jeffreyi*})
- 1875. *Eryngium elongatum*.

Blankenship, J. W.

1893. June 20. Larrabee Creek, Humboldt Co. (*Townsendia townsendii*).

dates acc. to his Journal. **

1792, Apr. 17. Sight Cape Mendocino.
Nov. 14-25, San Francisco Bay
Nov. 26 - Jan 14, 1793, Monterey.

1793, May 2-5, Trinidad Bay.

Oct. 20 - Bodega Bay.

Oct. 21-24. San Francisco.

Nov. 1 - Nov. 6. Monterey.

Nov. 10 - 18, Santa Barbara

Nov. 18-22, San Buenaventura

Nov. 27 - Dec. 9. San Diego.

* A launch was sent across the Bay of Monterey to get fresh provisions at Santa Cruz but Menzies did not go with her. The launch returned Dec. 26, 1792

** Part of Pacific Coast journal
printed = Apr. 8, 1792 - Oct. 13, 1792.

acc. to "Voyage".
1792, Mar. 17. Leave Sandwich Is.
strikes the Mendocino coast s. of Cape Mendocino and sails north.

1792, Nov. 14. San Francisco Bay.

1793, Jan. 14, Leave Monterey.

1793, Mar. 30. Leave Sandwich Is.

1793, May 2. Land at Trinidad.

1793, Oct. 19. San Francisco Bay
2d visit.

Monterey

1794, Jan 16. Leave Lower Cal. coast
for Sandwich Is.

1794, Mar. 15. Leave Sandwich Is.
for Alaskan coast.

1794, Nov. 6. Monterey

1794, Dec. 2. Leave Monterey.

1795, Oct. 12. Arrive in Shannon.

1795, Oct. 20. Arrive in Thames.

(Vancouver tells of his expedition
to the Pinnacles, vol. 3, p. 334)

Cont. p. 138 ante.

Taxonomic Principles.

Carlson & Rose's curious taxonomic habits are illustrated by their monog. of *U. am umbellifera*. Because so much more unknown from lack of spurs (which we would all admit) it seems as if they made it a principle to include almost every published species.

Pseudarum argentea Jones they include tho Jones himself sometimes it to *P. mohavensis*.

T. Brandegee

- Kernville. Was she ever here? T. Brandegee was. *Coldenia nuttallii* is put down as Kernville, K. B., but no date!

T. BrandegeeHis obscure stations.

- Tunis. Baffled me a long time. It is Tunis Mill, Elk Mt., nr. Lake Co. There is a Tunis in Los Angeles Co. near Los Angeles, but that would not do for the plant in question, whereas n. Lake Co. was all right.

- 1889. Sept. 3. Dixby Creek, Mendocino Co. (*Hamophila arida*.)

1892

- Apr. 17. Cottonwood River. (*Lisanthus dichotomus*)
- Aug. 25. Sun Mt. (*Mimulus primuloides*!).

Collecting Trips.

- Hackberry Cañon near Caliente (Eriophylus blanderi), no date. Portola (no date). Same sp. must be Portola, Plumas Co. and not San Mateo Co., but as usual she does not write down the data. Horse Camp Mtns. (Cynopterus terebrantinus), no date, no county.

- Good Sprs. s. Nev., May 1915.
- Andrews Camp, ^{no county,} no date. This is on S. Fork Bishop Creek, Inyo Co.
- Kearsy, June, 1915 (Phacelia irrisiana)
- South Fork (= Fresno Co., near North Fork) Madera Co. Aug. 1914
- Winnemucca Lake, June 2, 1913. in litt.
- Mt. Silliman. Aug. 19, 1905. in litt.
- Caliente, Aug. 6, 1900 in litt.
- Burns Trail, Santa Lucia Mts., 6-10-'09. Linum micranthum Gray.
- Mammoth Hill. July, 1913 (Rosaera speciosa). e. side Sierras.

1884

- Hough's Sprs., Lake Co., May (Bull. Cal. Acad. 2: 138).
- Eppersmo, "Lake Co.", July: " " " 1: 151.
- Kearsy Mts., " " Aug. " " " 1: 152.
- Coldstream, Lake Co., July (Huzelia abramsii). " " " 1: 114.
- Tehachapi, May, July. " " " 1: 153.
- Yucca (Muro), June, June (Phacelia abramsii).

1885

Indian Valley (doubtless Lake Co.) June. cf. Syn. Fl. 1: 311. No! = Monterey Co. See Spharalea aboriginum (Rob.) in Fl. Cal. vol. 2.

1886. June 4. Pt. Reyes (Cryptantha leiocarpa).

1887. July. Edgewood. Nama densum

1889. Leesville. Apr. Eppersmo, Apr. 17. (Gilia gracilis).
Donner Pass. July 7. Lappula floribunda.
Kearsy, Lake Co., June 26. (Cryptantha taraxacina).

1890. Apr. 22. Aluma (Plogiob. ustulobolus)

1887. July. Edgewood, Siskiyou Co. (Potentilla millefolia)
Mt. Shasta (Huzelia lyallii).

1891. Apr. 16. Lone Pine, Inyo Co. (Tricandria watsonii).
Apr. 4. Caliente. (Cryptantha flaccida).

1892. Aug. Snow Mt., Lake Co. (Huzelia wilsonii).

May 11. Caliente. (Cryptantha flaccida).
Apr. 4. Snow Mt., Lake Co. (Pentstemon purpureus).

1905. Giant Forest, Aug. Mt. Silliman, Aug. 22.
July. Alta Mtns. May 15. Kramer (Gilia verolenta).

Aug. 20. Aug 7. " " (Crypt. californica).
July 27. Marble Fork Kearsy.

1911. Franklin, Nev. July 23 (Gilia parviflora).
Bora, Nevada Co., Cal. July 28, 1911. (Gilia baueri).

- Landsburg. (Cryptantha drumetorum).
1913. - Mammoth, Inyo Co. July

- Mammoth, Mono Co., 13 July (Sedum
- Andrews Camp, July (P. pinetorum) Bdg.)
- Silver Cañon (presumably white
Mts.). July. (Gilia latifolia).

1909. May. Kramer (Gilia obovata).
Apr. Carson (Cryptantha drumetorum).

1910. Aug. 10. Hough Sprs. (Phacelia)
June Ochenden (Phacelia humilis) f. cult.

- Teratology. Osmaronia cerasiformis.
One flower with 7 petals, 7 calyx
lobes, 13 stamens. This of course
was a ♂ fl. and contained no
pistil - Oakland Hills, Feb. 10,
noted in the field.

Dica occidentalis. Corolla lobes
9; stamens 13; 2 distinct pistils.
Noted in the field with preceding.

- Plantago lanceolata L. Spikes leafy
at end! - R. Kuhn, East Oakland, spec.
in hb. - 1914.

Brewer's New Species. See p. 149.

Polygonum Bolanderi Brew.
Polygonum Shastense Brew.

- Brewer, W.H. He seems to have, on
the whole, collected few plant
specimens. In a hasty running over
of his Botanical Field Book I
do not seem to note any plants
from the southern Sierra Nevada,
Kings or Kern region. The expl.
in that region was later in
the Swartz's work; by that time
had he stopped collecting?

See note p 150; both these, Feb. 8, 1920.
See p. 148.

- List of species or new comb. by Brewer:

Arenaria californica Brew.
Pinus marginata var. mollis Brew.
Polygonum davisi Brew.

Vicia americana var. truncata Brew.

Lathyrus sulphureus Brew.

Trifolium Beckwithii Brew.

Cotyledon edulis Brew.

Trifolium macrocarpi var. dichotomum
- cf. "Notes on Botanical of Cal. W. Arn." p. 46.
p. 112.

- The few names of Brewer, new sp.

or new vars. or combos. are scanty. In a
world of new things it is difficult to
understand how he could have had so
little botanical interest in Cal. plants.

- Brewer, W. H. It does not appear from a rapid running over of Brewer's Botanical Field Book that he was ever at the Mariposa Big Tree Grove. He makes record of trees in the Calaveras Grove and in the Tuolumne Grove. His "Yosemite Trail" must be an old trail, since disused, by way of Thorpe, Lower Cave and Crane Flat. This is also the "Yosemite Trail" of Bolander. Bolander collected 5 pms. at the Mariposa Grove but I suspect he may be the first. Hillebrand's "Big Trees" means Calaveras Grove undoubtedly. In the first place, in the 60's, Big Trees always meant the Calaveras Grove, and secondly, he gives the elevation as 4788 ft. close to the 4702 ft. now given on the U.S. topographic map, while the alt. of Mariposa Grove is 6500 ft.

- Early botanical exploration in Cal. The gold rush brought to the state thousands of persons who sought to improve their fortunes. The rush contained the best there was from the eastern U.S., and also the worst. Many came in order to break with an unsatisfactory past and begin life anew. Some kept to their resolves to turn over a new leaf, others did not. B. H. W. Wendt remarked to me that in early days in S. F., one became acquainted with likeable persons, but one had to discontinue the acquaintance on account of their past life. - Feb. 8, 1920. Referring to this of my article on "But Harte and the Argonauts" in Sunset Mag., 1906. See file of separates.

— Early botanical exploration in Cal.
 Some ref. is made to the work
 of Whitney and Brewer of the
 Cal. State Geol. Surv. by Thos.
 Starr King in a series of
 papers which he wrote for the
 Boston Transcript in 1861,
 on the years 1860 and 1862 also
 possibly. King describes a trip
 up Mt. Diablo with Whitney
 and Brewer. There are at least
 23 of these letters, describing
 the scenery of California, the
 forests, the seashore, the Big
 Trees, the Yosemite. I have
 these facts from Chas. W.
 Wundt who has written a
 book on Thos. Starr King which
 is shortly to be published.
 — Feb. 8, 1920. The book is
 now published — June 1924.

— Bolander, H. U. — Chas. W. Wundt,
 Unitarian minister, spoke most
 delightfully last evening at my
 friends the Freemans of this early Cal.
 botanist. Bolander was generous, warm,
 hearted and most likeable. His
 temperament was somewhat excitable
 which showed in debate. He be-
 longed to a literary club which
 consisted of Bret Harte, Starr King,
 and many well-known ^{S.F.} writers of
 the day. Wundt himself was a member.
 In early Cal., the community had to
 depend upon itself and it is surpris-
 ing how much talent was found and
 developed. It is said in the Talmud
 always step up a bit in choosing
 your friends; in choosing a wife
 step down a bit. Wundt stepped
 up a bit, a young fellow he was, and chose
 the friendship of men older than
 himself and thus knew Bolander,
 Harte and others. — Feb. 8, 1920.

Nuttall, Thos.

New Species collected in Cal.

- Monterey, *Helianthemum scoparium*

Species in North Coast Ranges 155
and in S. Cal., but rare or missing in
South Coast Ranges.

- *Psoralea macrostachya*
- *Rhododendron occidentale*

Variation of species due to external factors.

- Cotton on silty river bank escapes frost at same time as that on heavy dark clay on the interior fields is killed by a killing frost, 31° . Country level, conditions all the same except soil. "The assumption is that the silty soil possesses the property of storing the sun heat during the day, and that this stored heat given out during the night protected the cotton from the frost temperature; and that the clay soil does not possess this property in the same degree". The frost came suddenly without preceding low temperatures to deprive the soil of previously stored heat. — Sci. 49: 310.

- Her place names give some trouble.
- "Oxtard ranch" "Near ^{the} boundary between Santa Barbara and San Luis Obispo counties". One does not know whether this is Santa Barbara Co. or San Luis Obispo Co. On a Supervisor's Official Map of Santa Barbara Co. I find a Oxtard land holding about $1\frac{1}{2}$ miles w. of Santa Maria.
 - "Suey ranch". Used in same way as above.
 - "Huasna". " " " " " "
 - Guyana, May 7, 1896. (*Phacelia distans*)
 - 1908, May 16. Santa Barbara. " "
 - I find: *Phacelia distans*:
Zaca Mtn., Alice Eastwood, June 17-22, 1902.
Printed label

Another sheet:

Zaca Mtn., Alice Eastwood, June 17-22, 1902.
Written label in Miss Eastwood's hand.

This shows the uncertainty of labels, especially when the spms. are not numbered serially, which numbering is always a check.

- Collecting date:

1894. Santa Cruz Isl., - (*Astragalus leucopis*).

R. D. Alderson.

- Witch Creek. Feb. 1894. (*Dodecatheon Clavlandi*).

- May, 1893. Pine Valley. *Phacelia curvipes*.

A. M. Carpenter

He and his brother spent a summer vacation, while students at the University, collecting for E. L. Greene. Carpenter told me that the entire collection was made in the neighborhood of the Bowman Dam group of lakes, which lakes are in Nevada Co. The printed labels read "Placer County, ang. - Oct., 1892". The labels were printed by the University. I do not recall any Nevada Co. label. See label with *Rottia crassifolia*.

- Mt. Tamalpais, Feb. 26, 1900 (*Vaccinium ovatum*)
- Pajaro Hills, June-July, 1899 (" ")
- 1901. Konkl, Bald Mt., Davis, Hupa, Writch.

pek, up Klamath R. to Orleans and Sonoma Bay,
entering Siskiyou Co. (at latter place), up Klam-
ath R. 6 or 8 mi. where he took Marble Mt.
trail, - Haypress Mtn., Cuddihy Mtn ("Cottin")
and Marble Mt. acc. J. P. Tracy in litt. circ.
1901.

Dunn, J. W.

- 1882, May 2. Santa Catalina Mts., Ariz. (*Hem-
chera sanguinea*).

Woolsey, P. S.

Kanabek River, 18 mi. e. of Visalia. (*Lathyrus*
3-20-98. calif.)

- *Phacelia Tomacetifolia*. cf. G. P. Vanseltine
in file 11/7/21.

McLean, H. P.

1876, Mar. 14. Angel Is. *Cynoglossum grande*.

Bioletti, F. J.

- 1892, 15 Aug. Drawbridge, Napa Co. (*Lathyr-
rus jepsonii*). More likely to have
been San Joaquin Co., where Bioletti is
known to have collected?

- Was at Summit Mdw., Lower Lake Road, Allen's Sprs., Lake Co., June 22, 1882 (cf. *Helianthella californica* in hb.).
- Was at Prattville, Plumas Co., (cf. *Br.*)
ipa curvisiliqua in U. C. hb.). July 20, 1882.
- Actua Sprs., Napa Co., Aug. 25, 1882 (*Lupinus formosus* var. *bridgesii* Greene).
- Calaveras Big Trees, June, 1886.
- Sutton House, Butte Co., July 14, 1882.
(*Pentstemon hoeglii*)
- Prattville, *Pentstemon gracilentus* Gray. July 21, 1882.

- Apr. 1887. Coll. *Allocarya scripta* on plains of Sacramento (Lit. 1:143). Prob. Sacramento Co. Where was he at June?

Species in common

- *Callitriche marginata*.
- *Gayophytum humile*.
- *Trifolium microdon* H. & A.
- *Lupinus microcarpus*
- *Sanicula crassicaulis* Boepp. & DC. Prodr. 4: 84 (1830). On Cal. *S. menziesii* is considered a var. of the Chilean sp. by Wolff; Engler, Pflzr. 4 (228); 75 (1913). When I was quite young with the Berkeley flora, it seemed to me as much like an introduced plant! though I knew it listed a native in the books.
- *Microcala quadrangularis* Griseb.

collecting notes.

- Napa Soda Springs, 1896.
(*Lewisia rediviva*).
- Big Tree grove, Santa Cruz Co., Apr. 24, 1887.
(*Vaccinium ovulinum*)

Species in moist beds of
former vernal pools.

- *Callitriche marginalis*. Cf. no. 1195.
notes.
- *Tillaea drummondii*. See notes sub
no. 1204.
- *Eryngium vasyi*. See notes sub. no.
1197.
- *Gilia cotulaefolia*. " " no. 1195a
- *Juncus nivalis*. " " no. 1205

All the above north of Vacaville

See ^{Francis} Ramaley's paper in Bot. Gaz.

- *Boisdendrea densiflora*

- Soda Spgs. of San Joaquin, Madera Co.,
= north fork San Joaquin River. Aug. 20, 1895.
- 1896, June 3. Woodward's, (set down as
Mariposa Co. on label *Navarretia divar-*
cata, but it may be Mono Co.).
- 1890, Aug. Soda Spgs. (*Pedicularis*
attollens?)
- 1894. Aug. " " " "
- 1895. Aug. 14. Crescent Lake. " "
- 1889. Aug. " " " "

Simulation of Species, especially of different families.

- *Collomia rawsoniana* and *Calamintha mimuloides*.
- ✓ *Dodecatheon Jeffreyi* foliage with that of *Rumex occidentalis*.
- *Pencedanum* (*Cynomaralhrum*) *Parryi* and *Gymopterus* (*Pseudogymopterus*) *anisatus*. The likeness here is remarkable. Plants are much the same size. Leaves same shape, same decoumpounding, same segments. The primary divisions really represent alternate divisions on the rachis and not 2 opposite ones as *namely* seems to indicate larger divisions much enclused or reduced. The bractlets in *Pencedanum Parryi* are linear or oblanceolate, notched or incised at the apex.

or entire (Telescope Peak, Jepson 7017; Charleston Mts. Purpus 6086; Providence Mts., T. Brundage; Johnson Cañon, Paeumint Mts. Hall & Chandler 7014).

In both species the season's shoot comes from strong winter buds terminal on the caudex with very large thin scales. Involucre none.

The differences are: rays very unequal in *Cym. anisatus*, equal in *Pen. Parryi*. Fruit 2 lines long, dorsal and interned. ribs winged in *C. anisatus*; ^{fls. whitish} fruit 6 lines long, dorsal and interned. ribs not winged in *P. Parryi*; fls. yellow.

For comparison with *Gymopterus anisatus* I use: Sierra La Sal, Southern Utah, Purpus & Gray Peak, Colorado, H. N. Patterson 40. I am assuming that these two are named correctly but the simulation and contrast holds just as well. There is another over-

spun. in U. C. Herb. lobbed *Cym. anisatis* which is very diff. from the two spun. just cited. Coll. by T. Brandegee, Sawatch Range, Colo. The leaflets in the two spun. freed. may be said to be divided into linear divisions, in this spun. the leaflets are cleft or incised only. The leaves resemble *Potentilla*

very much, i.e. in Sawatch Range plant.

- My 9320, dried pool bed, is *Gilia* (Navarretia) *squarrosa*. It suggests small plants of *Centronadia pungens* wonderfully. On opening the sheet after a year I took it to be the latter thing at first.

- *Begonia*, with leaves like as *Acer circinatum* (Dr. Houghton's study coll.)

- *Calycadenia oppositifolia* Greene. Hall 9764 Butte Co. & 10,305, suggest in their slenderness and habit certain Navarretia slender or wiry stemmed forms. This appears to be ecological and seasonal. cont p. 173.

- Proliferous branching due to seasonal conditions.

- *Oenothera trichocalyx* Nutt.

Forming a heavy spike first at the ground (sessile), then long stems of equal length, each with a terminal spike, the whole coiling basket-wise when dry, becoming loose under desert wind and scattering its seed like a tumble-weed.

- *Navarretia cotulaefolia* from Antioch

See spun. by Mrs. Curran.

- *Delphinium hesperium* from Forest Grove, Santa Cruz Mts.

- *Centronadias* + that slender little composite. (Pentstemon ? *Rhipsalis*)

- *Calycadenia oppositifolia* Greene. Humboldt Road, Butte Co., Hall 9764.

Proliferation due to prothymus of main axis.

- cf. vol. 37, p. 198a.

172 Dirt-slide Plants.

Plants colonizing land-slides in the hills and especially more or less continuous dirt slides.

- *Eucharidium emicatum*
- *Lupinus* (no. 9061)
- *Lupinus* (no. 9053)
- *Senecio* (no. 9050)
- (no. 9051)

Talus is a marked formation for plants which favor disturbed soil. *Eriogonum nudum* Dougl. on talus at Lake Tahoe, 7 ft. tall says Miss S. G. Stokes.

173

Simulation - cont. from p. 170.

- *Calycaenia ciliosa* Greene. Stem first put out a large number of short-peduncled heads racemously, the peduncles densely leafy-bracteate, then above this 1 ft. high axis the stem developed a large panicle. The early growth simulates *C. spicata*!, the later *C. ciliosa*. See spec. by K. Brandegee, Kelsey, Lake Co.

Cleistogamy.

- Viola

- Polygala californica Nutt.

Torrey, John

- One of his labels bears the printed legend: "Foothills of the Sierra Nevada, California. Collected by J. Torrey, 1863"

[Lesqueria leptoclada var. microcephala. No. 202. In Gray Hb.] The special loc. on this label, in pencil, is "Bear Mountain", undoubtedly Mariposa Co.

Herbarium Specimens Missingfrom Univ. Cal. Herb.

- *Thermopsis velutina* Greene. San Emigdio Mt.
reras, Mt. Pinos, Hall 6378. } Found.
Also Manzanita, Dary 2480.

Parthenogenesis.

- In *Alchemilla* (Bot. Gaz. 38:309).
- Hybrid between Common Orange (*Citrus sinensis*) and *Poncirus trifoliata* give sterile seeds with false embryos derived from the nucellar tissue of the mother plant, i.e. they originate parthenogenetically and when grown carry on a pure strain of the female parent. Svingb. Journ. Wash. Acad. Sci. 7:57.

Fry, Walter, collecting dates.

Nos. 101-115 = Banafee Flat, Sequoia Park.
cf. Tappan Corr., 34:170

- Pringle, C. G. - in Cal.
- Mts. about headwaters Sac. River, Aug. 31, 1881 (acc. *Hues. Orchid.* 4:75).
- Colton, Oct. 12, 1882 (*Lesqueria glandulifera* in Gray Hb.).
- Santa Cruz, 1882 (*N. Am. Fl.* 22:124).
- Lancaster, July 4, 1882 (*Pholisma areolarium*).
- Pine Mt., Santa Lucia Mts., opp. San Simón Bay. (*Mimulus subaequalis* Gray, one of the type nos. (322), cited in Syn. Hb. 445) He collected a number of most interesting plants on this mt.

- Parry, C. C.
Lake Tahoe, Aug. 1888 (*Utricularia vulgaris*)

- Palmer, Edw.
Tracy, San Joaquin Co., Aug. 22, 23, 1892.
(*Solanum nigrum*).

(12)

- Palmer, Edw.
- Guadalupe Isl. 1889 (*Phacelia floribunda*).
- Mohave River, May, 1876 (label *Lycium*).
- Rock Spr., Providence Mts., acc. ^{Cooker} Syn. Fl. 2^d: 235 (1878).
- His collecting for 1888 detailed in Contrib. U. S. Nat. Herb. 1:1.
- Mt. Shasta vicinity, July 13-27, 1892. (*Oreocarya hookeri*). Also *Phacelia mutabilis*, painted label.
- Chico. June 7-12, 1892 (*Maronnetia* ^{intermedia}).

- Austin, Mrs. R. M., was a remarkable collector. She collected many things in the northern Sierra and Modoc Co. not since obtained by others:

- *Utricularia intermedia*. 'Big Meadows, Plumas Co.'
- " " " " " " " " " " " "

- *Lysimachia chrysi flora* " " " "

Collection dates - R. M. Austin.

- 1893. July. Drava Valley (*Lupinus pusillus*).
- 1893. July. Cascades e. of Ashland (*Oedocatherum*).
- 1894. June. Lassen Peak (*Oedocatherum alpinum*).
- 1896. July. Colby, Butte Co. (*Viola blanda*).
- 1894. May. Goose Lake Valley (*Viola nuttallii*).
- 1880. Big Meadows, Plumas Co.
- 1896. Aug. Lassen Peak.
- 1879. Eagle Lake, Lassen Co. (*Phacelia racemosa*).
- 1882. Aug. 10. Lassen Peak, 9000 ft. (*Ranunculus menziesii*).

Greene, E. L. { See "Notes on
the Botanists
of Cal. & W. Am.
p. 83.

Calendar of his collecting
Trips in California
and the West.

1867 - Piatt Co., Ill. Apr. 29, May 10.

1870. - Denver (Apr.)

1871. - Golden City, Colo. June 20. -

1873. - Denver.

1874. - Valley, Apr. 18. Apr. 25 (Mt. Tamaulipas)
dry hills at Matla, Aug. 13 (*Larrea ramulosa*
in Gray Hb. No. 336. Greene numbered that year!)
More Island, June 9, 1874 (Ann. Mo. Bot. Gard. 12: 47)

1876 - Yreka. July. *Erythraea muhlenbergii* 471

1877. - San Diego to Yuma (Feb.).

1883 - Near Middletown, Lake Co. Aug. 23.

1884 - Trip to upper San Joaquin Valley, at Tulare
Apr. 15, 1884 (Syn. Fl. California).

1886 - . Suisun (May 2). Islands of
Santa Cruz (July - Aug.)

1887 - San Mateo Co., June 11.
Livermore, 10 May (*Dodecatheon patulum*)
? doubtful date. see 1889.

- 1889. 10 Mar. Livermore ^{E. L. Greene} See Greene's early
more (*Dodecatheon*
patulum). papers in Bull. Torr Club
vols. 9 & 10 etc. These give dates
more freely than other papers.

- 1889 - Byron Sp. (23 Mar.) Tehachapi
(20, 22, 24, 25 June). June 12 (Mt. Kel-
sume Hill; also Eldorado Co. as on type sheet of
Logophylla congesta Greene).

1890 - "Lower Sacramento" (probably
Suisun), 5 May. Elmira (4 May).

Suisun, 4 May (see *Downingia concolor*?)

- 5 May he collected *Houellia lin-*
osa which he says coll. at
Elmira (Pitt. 2: 80). ^{face to an herb label}
(in Pittoria)

- Chico, June (coll. *Orcutia Greenei* Vasey)

- 1881, Sept. 9, Tehachapi Pass (on a trip
with Dr. Parry!) - Bull Torr Club.
(9: 16)

June 30, Calistoga (also with Dr.
Parry!) - L. E.

- 1880. Pinos Altos Mts., N. Mex. (Bull. Torr
Club. 10: 42).

- 1885. L. Cal.: Cape San Quentin, May 10,
1885. Todos Santos (all Saints Bay, Apr. 16 and
May 16. - Bull. Cal. Acad. 1: 148.

1893, Donner Lake, July 19.
near Castle Peak " 20 (Erythra 3: 64).

* How many of our labels bear the date Mar.
23 - the natal day of Univ. Cal., therefore
a holiday.

Collecting trips.

- "Chiricahua and Huachuca mountains
 Ariz. Sept. 1881-2." *Dalea ordiae* Gray.

1884. - Humboldt Spr., Mohave Desert. May 10.
 (*Cynopterus teretissimus*).

May 11 (*Gilia depressa* Jones).

Apr. 21, Fort Mojave, Ariz. (*Gilia polycladus*).

May 12. Calico mines (*Gilia filiformis*).

1889. - "near Shasta", June 28 (Penced-
^{arum} ?).

Mt. Eddy, June 28 (*Trifolium longipes*).

- "upper Stanislaus River". June. Rfls. 2:6.
 Not further or much further than the
 Calaveras Big Trees, I believe.

1891. May 28. Capay Valley (*Sphaeralcea franseria* var. ?).

Purpus, C.A.Calendar of his collecting trips in Cal.

1898, Apr. - Potter Valley.

1895, Apr. - " " (*Vaccinium ovatum*).1896, Aug. - Little Kern River. no. 2032 (*Minardella odoratissima*). 9-10,000 ft.1897, July. Linn's Valley (*Pogogyne douglasii*)
no. 5019.1897, July. Bear Creek (*Minardella lanceolata*).
"3-4,000 ft." no. 5040.(Purpus marks such labels "Middle Calif-
ornia"). This is probably Kern Co.,
Sierra Nevada.

1894, July. Sur Gerölle des Est River. no. 1250.

This must have been north of
Potter Valley on the main Est, I take
it.Mar. Potter Valley. *Cynoglossum grande*. no. 3088.Apr. Potter Valley. *Orthocarpus erianthus*
no. 3093.1897, June. Palmit Peak, Kern Co. *Penstemon* on
palmeri var. *grinnellii*.1895, Aug. Little Kern River. *Penstemon palmeri* var.
grinnellii.

1897.

Apr. Est. Pal. Mts Peak. *Gilia pungens*. no. 5505.
8000 ft. This is almost certainly Kern
Co. Label reads: " flora Southern Cal."Sept. Little Kern River, 9-10,000 ft. *Gilia pungens*.
"Middle Calif."Apr. Est. Pal. Mts Peak. *Gilia pungens*. no. 5503.
7-8000 ft.June. Madruguer Peak. *Gilia pungens*.
no. 5456. 6-7000 ft. "Se. Cal."June. Argus Mts. *Gilia matthewii*. 4-5000 ft.
no. 5355.July. Bear Creek. no. 6002. *Minulus flori-
bundus*.

— For Kern Co. in southern Sierra
Nevada, Purpus used both the general
term "Middle Cal." and "Se. Cal." He also
used "Sw. Cal. to S. Utah" without specific
indication of state, but giving a locality.

1897. San Clemente Isl. In Mrs. K.
Bradley's hand (*Galvezia speciosa* Gray).
Date 1897 in pencil in another hand.

- 1874. Suinn Valley (May 19).
- 1889. Upper Stanislaus River, June 17.
See spec. of *Calyptidium umbellatum*,
Jepson herb., in Greene's hand. I doub.
if there were much beyond Calaveras
Big Trees.
- 1888. 31 ang. Petrified Forest, Sonoma Co.
(*Navarretia tuberosa*?)
- (1882. Knight Valley, 20 Apr. (*Phacelia distans*)).
- 1885. Mohave (sta.). *Amaranthus rotundifolius*
↑ March
ata. But the loc. + date +
name in hand of H. Frank-
gee and, therefore, to be taken
cautiously. = *A. tessellata*.
March. San Fernando. = " " "

3, 1885

- 1886. Apr. 16. Fidalgo Santa Bay. (*Cypripedium*)
- 1886. May 3. Vacaville. (*Phacelia canes.*)
May 24. Mt. Diablo (*Rafinesquina californica*).
July - ang. Island of Santa Cruz. " " "
- 1884. April. Plains of Kern Co. (*Phacelia canes.*)
Apr. 21. " of San Joaquin Valley (*Alloca
+ radicularis* in Gray Hb.).
- 1892. May 1. *Aquilegia truncata*.
- 1883. Sept. Colfax. (*Navarretia filicaulis*).
- 1889. Mar. 24. Byron (*Delphinium recurvatum*)
July 21. Mont. Fisher, Ida. (*Orthocarpus
luteus*). [Fl. Cal. 1: 525]

- Miller Mt., 7500 ft. 6-6-82 (*Lupinus
parviflorus*).
- Auburn, Cal., ^{↑ Mar.} June '86 (*L. nanus*).
- Golden Gate Park, S.F., June '86 (*L. arboreus*).
- Bishop Creek, Cal., May, '86 (*L. superbus* Hal.).
- White Mts., 11,000 ft., July, '86. (*Lupinus hirsutus*?)
- Miller Mt., May 18, 1882 } *Chamaecrista*
June 22, 1881 } *serotina*
- White Mts., Sierra Shockleyi, July 22, 1886.

- 1886. White Mts., July. 22. (*Epilobium brevistylum*)
July 22 (*Rumex pauciflorus*).
- Auburn, Cal., June (" *conglomeratus*).
- Reservoir July (" *salicifolius*)
perhaps Auburn.

1888. Davis ranch, Esmeralda Co., Aug. 18, 1888.

1882. Belleville, Nev. June 11. no. 223. (*Rumex
venosus*).1890. June 27. Chico. (*Antirrhinum cornutum*)1892. Apr. 23. Knight Valley (*Ortho-
carpus fasciculatus*. U.C. Hb.)

Unbranched axes.

- *Perissis aëris aelada*, described by Schrotli, without any lateral branches at all. Cf. Debries, Die Mutations-theorie, p. 455.

Parry, C. C.

1881. June. Yosemite. (*Navarretia divaricata*)

Reaction to Mutilation.

- *Ceanothus cuneatus* Nutt. Crown sprouts show strongly dentate leaves or rather many dentations. Notice that the leaves are in whorls of 3! See Jepson no. 4710, from Grouse Valley, Tulare Co.

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Asa Gray, Slips by, Misjudgment
of.Edw. L. Greene,
collecting notes.

191

1894. June 19. Mt. St. Helena (Antirrhinum
virga).
(not in Greene's hand).

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Curiosities of Botanical Literature

- "Index to Latin Genera", Britton's Ill. Fl.

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1903

June 30. Crystal Sprs. (Ann. Mo. Bot. Gard. 12: 97).

May 7. Rumsey (*Eriodictyon californicum*).1909. May 15. na, near Claremont. (*Phacelia brachylepis*).

- 1880. Berkeley, July 4 (Ann. Mo. Bot. Gard. 12: 47).

Howell, Thos. J. - Sw. Ore. trips.

- 1890. - Aug. Coast mts. near Waldo (*Potentilla sericata*).
- 1884 - June. "Coast Range in Curry Co." (Proc. Am. Acad. 20: 364).
- 1885 - June 4. Stein's Mountain. (*Oenothera polyssoides*).
- 1885. July 5. Gas Bay, Alas. (*Pinguicula vulgaris*).

- Hosack, Dr. David, native Scotland, founded first Botanic Garden in America in 1801. - Trans. Wash. Acad. Sci. 9: 658

The Delight of Taxonomic Omniscience.

- "examination revealing an array of very pronounced characters" - this of an *Arche* in the *suffrutescens* group, (!).

- Greene, *Leaflets*, 2: 77.

He divides up *Brodiaeas* with the utmost confidence, indeed one may say omniscience.

- R. Rydberg and *Diplazium*.

Rydberg's omniscience seems to me, however, a bit crude or unfinished compared with the omniscience of Greene. That shines with a clear, a dazzling, a compelling light truly wonderful, especially when concentrated on a disposition of things, that is open to doubt or possibly false.

Not possessing omniscience I am unfortunately not able to appreciate the manifestation of it in others as I ought. While, for example, I make one genus of the *Brodiaea* things I

apprehend fully, I think, the possibility or advantages of replacing it with a number of genera. But when you have omniscience you do not admit any possible alternative; there must infallibly be 15, 20, or 25 genera and not one. I suppose we might have an omniscience which decreed just one genus, but that kind of omniscience has not lately been in evidence - Nov. 1917

- "*Allium* ^{unifolium} Kell. "Its peculiar character of root is imaginary" - Jones, *Contrib.* 10: 84

- "the Brittonian system under which Mr. Greene is supposed to train." - Jones, *Contrib.* 8: 24. Jones never knew how poignant this is. He meant it merely for a knock-out blow.

- A correspondent ^{asks} advice as to his "qualifications" for compiling a useful flora of

of southern California. My field is
physics." - E. H. Kennard; cf. Jepson Corr.
[for year 1919.]

- The replacement of the name *Prunus fremontii* by the name *Prunus eriogon* by Mason (Journ. Agr. Research 1: 167) is one of the curiosities of botanical literature.
- Johnston, J. H. He comes down as ~~a~~ species on the amount of material in the pocket as compared with other material in the same pocket (mixed). This relates to a *Nanna* or some related genus in Calif. see his papers about 1923.

- R. B. 1: 186

- "Any one can recognize most of our plants from a distance of twenty feet or more. * * * It is not necessary to use the obscure structural features and the numerous technical terms which are employed in other books."

- H. A. Gleason, in circular re. "Plants of the Vicinity of New York", a flora by himself. 1935.

cf. also his subservience to Gray's Manual, p. ii of fl. and his statement that no improvements have been made to his (Gleason's) fl. but it tend to confusion with Gray's Man. (1908) !!!

- Non-credit to Jepson's publications.

Cont. from p. 200. I know positively that the agricultural men in our College of Agriculture use my books a great deal. Though giving credit to other floras they do not to mine. They are simply following the lead of the Dept. of Botany men. For example A. W. Sampson has gotten out a bulletin on "St. Johnswort on Range Lands in California" - Bull. 503, 1930, - U. C. Agr. Exp. Sta. Indubitably he used my Manual - but he cites it not, - he cites Piper's flora of Washington, etc.

Non-credit to Jepson's Manual
and other books.

The fashion of not giving credit to Jepson's books was first established by H.M. Hall. One of the ways by which I know that authors have been using my books is re. the common names of native plants which are my own invention and could not be had from any other source. Now, there is no "patent" on common names as in the case of Latin names and one cannot and should not object to their use - to their being copied. In fact that is what one wants of course. There is, then, no objection whatsoever. Nor would I ever complain of credit not being given. It is not of sufficient importance to make complaint. But it is interesting, especially under the circumstances, because - why? -

because it is amusing. The following have used these names but never given credit:

Hall, Flora of Yosemite
Hall, Carnegie Publications
Gilkey, Spring Flora nw. Ore. (uses "Lancharia Clara")

Knoche, Quar. Soc. Cal. Pioneers, 6:18-181. See my note in separate reprint. (Woods file).

The main point is that the first two authors used my floras in general without giving credit. (Cf. Notebook, Common Names of Plants, p. 3.)

Mohave } Lanfair, addresses.
Desert }

- W.T. Waer, Lanfair, "will take you through Piute Cañon"
- D.M. Henderson, Ledge, "will drive you to the Giant Ledge mine in the New York Mts."
- California Gold & Copper Mines, Von Trigger via Joffe, San Bernardino, Cal.



J. P. Kellogg, Man. Yos. Transp. Co.
(Store)
El Portal.

A. R. Penfield, Man. Big Tree Line, Yos.

E. N. Baxter, *Stawona*
Photo. at Mariposa Grove

Monterey

Lee, Supt. Del Monte Grounds

Schultz, Head Gard., " " "

Mrs. Dobbin, member. Monterey
Tree growing Club

Sargent, C. S. - Sprms. sent.

- 60 sprms. trees & shrubs sent
him Dec. 1913. Expressage 70c

- 28 sheets, *Cupressus Bakeri*
+ *Arctostaphylos* from Santa
Sept. 18, 1914. Postage 60c

- 104 sheets, trees and shrubs
by Wells Fargo express



Many collecting dates can be
picked up from revisions which
give dates, such as Grants, Minahan,
Ephraim, Minardella, O'Leary, Lotus, etc.

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Vernal Fall - 317 feet high.